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**ORIGINAL ESSAYS.**

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*Papers on the Summer Epidemic or Yellow Fever, in several  
Ports of North America, and the West India Islands.*

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*Statement of the Yellow Fever, as it occurred in New-Orleans,  
1819. By J. Baxter, M.D., &c. honorary Member of  
the Philadelphia Medical Society.*

I WILL premise with an account of the state of the weather, according to my own observations noted at the time.

June.—The latter part of this month (on the 24th of which I arrived at the city) was attended with severe squalls, much thunder and lightning, rain, high winds, and cloudy, cool weather, especially at night.

July—was mostly cloudy, with frequent showers, there being nineteen days on which rain fell; and the last four days it fell constantly, attended with high winds, blowing to a violent gale, which did considerable damage, more especially at Mobile, and Bay of St. Louis. The highest degree of heat I observed this month, was on the 15th, at 2 o'clock, when the thermometer stood at 94° Fahr. and the lowest at the same time of day, and in the same place, viz. in the shade, and in a passage, was 76°, on the 30th and 31st of the month; on the morning of the 29th it stood at 73°; its usual range was from 82° to 88°.

August—was cloudy and rainy, there not being one entire

clear day; the sky was constantly more or less covered with clouds, and rain fell every day, with the exception of six. The range of the thermometer was from  $76^{\circ}$  to  $86^{\circ}$ ; in no instance did I observe it to rise higher. The sickness and mortality increased very much during this month.

September.—The first few days partook of the character of the last month,—the weather afterward becoming dry, cool, and clear. The thermometer rose as high as 90 degrees on the 11th, but from  $79^{\circ}$  to  $83^{\circ}$  was the usual range;—on the evening of 30th, it fell to  $72^{\circ}$ :—the mortality was at its maximum this month. There had been several cases of fever previous to my arrival, and one very early in the spring. Mr. Sweetser, of Boston, died in March, after a few days illness, attended with black vomit.

The first case that occurred to me, was on the 29th of June, some of the particulars of which I referred to in a letter to my friend, Dr. J. G. Coffin, of Boston, republished by you, in your Number for January last,—and the next was on the 30th of the same month, after which, cases continued to occur frequently, until towards the latter part of July; the symptoms had, however, gradually become more malignant, and deaths in proportion:—at the end of the month the disease seemed to be suspended; it was at this time the gale occurred, when the thermometer within an hour, fell from  $92^{\circ}$  to  $85^{\circ}$ ; and afterward to  $76^{\circ}$ , where it remained for three days. Of those already sick, none died, as was observed to be the case in a like pause in Philadelphia, in 1793;—this was but deceitful; and the disease renewed its progress soon after the beginning of August, with increased vigour, and with the most malignant symptoms.

At the beginning of the season it took on the intermittent form, but at the latter part, especially after the above pause, it became remittent, and continued. The 3d.

5th, and 7th days were the most critical; those who reached the 7th day generally recovered: one of my patients lingered to the 29th day, and then died:—relapses usually proved fatal.

The disease attacked with the watery, fiery, rolling eye, incessant vomiting, pain in the head, back, and extremities, and at the epigastrium, with soreness on pressure; pulse sometimes low, and fluttering, at others full, frequent, and hard,—skin at first hot, afterward cold to the touch, with a sensation of great internal heat to the patient, which was a very fatal symptom, as were also a clean tongue, and partial perspiration, involuntary passing of urine, and *foeces*, and delirium; but the most fatal symptoms, were a total suppression of urine and hiccough; these went off in one of my patients before death, and I had but one recovery with the last-mentioned symptom. The suppression did not seem to arise from retention, as far as I could judge, or learn, but rather from a want of the secretion, and that not from an engorgement. Dr. Randolph informed me, he had once seen *pus* in the kidneys.

The black vomit was not so general as is usual; I saw but one case of it; the suppression of urine seemed to have superseded it,—this was also remarked to me by several medical gentlemen of the place. Towards the last of the season, nausea and vomiting were not so common as at first. A physician informed me, that he had seen several patients who called on him with the black vomit. I was also informed of a lady who walked about till within a few hours of her death; the most prominent, and almost the only symptom of her disease, was suppression of urine. I had one patient with scalding of urine, and two with swelled testicle; the tongue was generally white, or red, but usually black in fatal cases,—yellowness of the eyes and skin came on about the 3d or 5th day; this was by no means a universal symptom: in one case it went off before death. In one of my patients, there was a great soreness of the joints, cramp in the *gastrocnemii* muscles, and total incapacity to

move himself, or to be moved; in which state I had left him on the 5th day. I heard soon after, that he had run into the streets after knocking down his nurse. This man had a carbuncle on the fore arm, which bled profusely just before death,—he also had petechial and miliary eruptions.—A great soreness to the touch was not uncommon in some cases, which rendered the weight of the bed-clothes oppressive, and was so severe as to produce violent screaming. Great constipation of the bowels was common, requiring powerful purges, which in all the cases I saw, produced black and fœtid stools, that became, by persevering in these, green, and then light coloured. Partial diaphoresis was seldom favourable, and connected with cold extremities, was fatal,—a continued hot skin was always so. I had one case which seemed to affect the bowels; but by the remedies employed, it was elicited in its more usual form,—sudden deaths were common, in 24 and 36 hours; I saw some apoplectic cases in habitual drunkards.

Great pain existed in many to the last, but the usual terminations were with low delirium, hemorrhages, diarrhœa, hiccough, inability to swallow or speak, cold extremities, laborious breathing—death. Scars on the head were very painful to several who had not the fever, as also to a patient of mine who had it.

In August the mortality was great; on the 13th the number of funerals in a day amounted to 16, and on the 29th, to 25; but in Sept. they increased greatly, so as to make 36 on the 5th, as I was informed by the old grave-digger, who was at work in the mud and water, in the grave-yard. He said, the usual number a day this month, was from 22 to 25. I have said in my letter before referred to, that there had been 54 on the second, but this was from misinformation. I judged from the proportion of Catholic funerals, that the mortality was as great among the natives, as among the strangers, this month. Though there appeared to be diffe-



rent degrees of susceptibility to an attack in different persons,—those from the eastern section of the union had it most violently.

*Secondary attacks.* The number of these that I knew of, was large, both of such as had the fever in this city and elsewhere. A young physician from Ireland, who told me he had it in Havana, died from a second attack. The first patient I had, had recovered from it in the East Indies; several others came under my observation, and the writer of this had an attack several years since in Philadelphia. I did not escape it at New-Orleans,—an immunity from it does not seem to be purchased by former suffering.

*Of its Contagiousness.* In order to ascertain this quality of an epidemic, the first cases which occur are the most important, and require more particular attention.

When the disease has become wide spreading, extending its ravages to distant points, the advocates of either question have their resource, as it is difficult to fix the limits of the assimilatory process; or to say how far the infectious miasms may be wafted. Even after a few cases have occurred, the previous exposure, both of those who are taken down, and those who escape, to the causes to which the origin is ascribed by both parties, is so common, that it is impossible, perhaps, to ascertain to a certainty, whether the former have sickened from attendance on their sick friends, or from exposure to the same causes; and why the latter should escape.

Sporadic cases, those which are the first well ascertained, and those which sicken at very distant points, after leaving the places where the disease is raging, must be regarded as the best evidence on the contested subject.

I did not find that the case I have mentioned, as occurring in March, could be traced to any foreign source whatever; and as the common bilious fevers were prevalent at this time, it may be considered as supporting the views

of Doctor Bancroft respecting the yellow fever. The friends of this patient, though with him to the last, and sleeping in the same apartment, retained their health *there*, though they suffered with the epidemic afterward. A few cases again occurred in May, but could not be attributed to any foreign source that I could learn; and there had been several cases at the Army Hospital of the United States previous to my arrival in June, but none at that time. Three cases terminated fatally, but were not considered as arising from a foreign or contagious source, as I was informed by the surgeon, Dr. Mercer, a gentleman of great respectability, and much experience in this disease.

The first case which came into my hands, was the master of the vessel in which I arrived at that place. He had not been exposed to any possible source of contagion, there being none in fact, as I was credibly informed, then existing in the city; and had he been so exposed, I could not but have known it: he was attacked on board the vessel, at the levée, on the 5th day after arriving. The second case I saw, occurred the same day in the vessel alongside the other, and had not been exposed to any cause of foreign origin,—both vessels were recently from the eastern states. Both these persons recovered, but died afterward of the disease late in the season.

The quarantine laws had been, and were during the season, vigorously enforced on all vessels arriving from those places where the fever usually rages. This was the case in relation to a vessel which arrived from the Havana: while this fever was committing its ravages at New-Orleans, she was detained twenty days, at the quarantine ground, in the most disagreeable situation, sufficient to produce sickness, if coming from the north pole. The next cases that came under my notice, were six persons, in the same Hotel with myself, who were taken down the first week in July. They were persons who had arrived in the city before me, but I could not learn that they had been exposed to any personal infection. The Hotel was

on the levée, exactly opposite the two vessels, on board which my two first patients sickened. It was along this levée that most of the cases occurred after this, and as I was told, usually occur in other seasons. Among the shipping, it was peculiarly fatal, yet in the onset seemed almost confined to the seafaring class of people. Not a vessel escaped without some loss, and some with the loss of all on board. The upper part of the levée, where the boats from *up the river* lay, seemed to be as much affected by the disease as the lower. A steam-boat (the Vesuvius) lost her captain, crew, and three passengers,—she was then ordered to the other side of the river. The French crews did not escape; all the French vessels lost more or less. All on board the Frederic Adolphe died, excepting the captain and mate, who had the disease, but recovered; many other natives of France were sick, and died. The cases that occurred were now so numerous, and the devastation so great, that it became impossible to trace them:—indeed so much confusion is liable to exist at such periods, that it were useless to attempt it, as cases may be attributed to contagion, which have originated from the same sources as those, that are said to have communicated it, viz. the infectious exhalations; which being constantly generated, and not dispersed by strong breezes, extend until the circle of their influence includes remote parts, which from their situation may be perfectly salubrious, before contaminated by these noxious vapours.

Many are in the habit of leaving the city, and retiring to the shore on the Bay of St. Louis, in Alabama, during the summer season; but some are not, from circumstances, enabled to leave the city until late, when the disease has become epidemic. Many of these fall sick at the shore, which is a perfectly healthy situation; but in no instance communicate the fever to those about them, who have resided there the whole season or longer. Facts of this kind are numerous, and have occurred during this epidemic in many places.

Instead of endeavouring to trace an uncertain connexion between remote effects and distant agents, which method is too often pursued in investigating the subject of contagion; it should be our endeavour to follow the regular gradation of phenomena, from which they derive an existence, in order to arrive at correct conclusions in this system of causation.

It is well known, that intermittent and remittent bilious fevers are endemic at New-Orleans, at all times of the year in common seasons; and its character for insalubrity is but too well established on the ruins of the hopes of many in this part of the union. The topographical account of the place, therefore, will not be irrelative to our subject, any more than meteorological observations, at the time of the prevalence of the epidemic under consideration; which was said to have exceeded, this season, any former ones since the place participated with us our happy form of government.

The city is situated between the river and swampy ground; and beyond the latter are thick woods: these swamps extend both above and below the city, which is situated 128 miles from the mouth of the river; the banks of which are of alluvial formation, and lower than the water, when that is at its height. The soil is composed of a rich loam well cultivated near the city, but less so as you approach the mouth, where it is little else than a marsh; under water much of the time; the Levée being discontinued. This is a mound of earth, raised to prevent the overflowing of the river, which is from four to six feet above the soil when at its height, but on a level, or even below it, when it has fallen to its lowest, which is during the summer months. The river rises higher, and falls lower, some years than others. The Levée is sometimes carried away by the force of the current, which at the city runs from three to five miles an hour, and the country is consequently overflowed, and much damage is done. There is no tide at the city; the water is fresh, and used for all do-



mestic purposes by the inhabitants, and when filtered is very sweet. The well water is very brackish, and unfit for use. The river at this part is about a mile wide. The ground on which the city stands is, as already observed, a soft loam, and it is laid out with much regularity in squares, the streets running at right angles. The levée on the margin of the river is wide, and answers the purpose of a quay or wharf, along which the vessels lay in tiers, and pass their cargoes over each other. The nearest vessel at this season lies some distance from the levée, owing to the shoalness of the water; the bank forming a steep inclined plane from the levée to the middle of the river. A great part of this bank between the vessels and the levée is laid bare by the recession of the water, when the river falls very low, which was the case this season. It is covered with filth of various kinds from the vessels, and the city, most of which is deposited there during the night; which, together with a vast quantity of decaying vegetable and other matter brought down the river with the current, and lodged here, forms an immense mass of putrifying materials, that continually exhales most disgusting and noxious effluvia.

The streets are unpaved, and have on each side, at the margin of the walks, wooden gutters, to convey off the water; but owing to the want of declivity, the whole city being completely level; the water, with the filth which is thrown into the streets, collects in them, and generates much foul air. Such is the nature of the soil, that after heavy rains, many of the streets are impassable for carriages, and very difficult even for foot passengers.

Another great source of the unhealthiness of this city is, no doubt, to be attributed to the marshy land surrounding it, more especially that above and behind it, which constantly exhales pernicious miasms.

The grounds back of the city are always more or less covered with water, and in the rainy seasons particularly so, from the nature of the soil and the low situation. When

graves are dug in the burial-ground, which is situated in this swamp, they are almost immediately filled with water, so that the coffin floats when placed in the grave. Those who can afford the expense, have brick tombs erected above ground, in which the body is placed. The custom of following the dead to this place of interment, may have conduced to the sickness of many. Several of my patients sickened immediately after performing this duty to their deceased friends. The house in which resided a family whom I attended, and in which the fever was peculiarly mortal, was opposite, and not far from this part of the swamp.

As is often the case in warm climates, imprudent exposures are frequent, and excite attacks; the custom of sitting out of doors is much practised in the cool and damp evenings, which are very grateful after the heat of an almost vertical sun during the day, but produce chilliness and languor from the dews and fogs arising from the morasses in the vicinity. These exhalations, being no longer suspended in the higher regions of the atmosphere, descend, and hang over the city, which seemed sometimes enveloped in them, producing disease in those who will purchase a momentary gratification, at the risk of health and life. The most malignant case I attended was induced in this way, and came on in the morning. My own attack was also in the morning, after sleeping on the deck of a vessel the preceding night.

From this statement of the situation of the place, we may perceive that different local causes exist in the city and its vicinity, without resorting to importation or contagion. The line at which this pestilence begins, and along which it spreads, viz. the *Levéé*; and the devastation it occasions among those employed among the shipping, would seem to point out its origin to be at New-Orleans.

It may be doubted, perhaps, whether animal putrefaction alone is competent to produce the disease. The smell from the point opposite the town, where the cattle are slaugh-

tered, and where the butchers reside, for they are not allowed within the city, may be perceived from the middle of the river, and resembles that of a dissecting room; yet the fever is said never to occur among them; and it is impossible but that they must be often exposed to its contagion, living so near the city, were there any danger of taking it in that way. The meat too in the butchers' market, after hanging a long time, exhales the same smell; yet I could not find that those who attended the market were more unhealthy than others.

The diversities of practice, all of which sometimes fail in this disease, would seem to prove the insufficiency of medicine in overcoming it; but this must be attributed to the malignant and varying character of the symptoms, which would seem to indicate to the practitioner to vary his remedies accordingly, following up the state of the system, and marking peculiar idiosyncrasies. For if always we judge of the state of the system by indications drawn from other diseases, we should be frequently led into error, mistake a debilitated for an oppressed state, and bleed when we should stimulate, or vice versa. The failure of the most opposite plans of treatment was often observed, and was conspicuous in one family in which I attended, and in which the disease was peculiarly fatal, leaving but three persons, two of whom were not sick, though in constant attendance on the others. Different modes of practice, pursued by different physicians, proved ineffectual. The one that recovered had but a slight attack,—from which many would be led to conclude, that none but slight cases recovered, and such as would have done well without medicines; but from what I experienced in my own person, as well as saw in others, I am disposed to dread so sweeping a conclusion against our profession.

*Venesection*, when resorted to early, promptly, and fully, was most beneficial, and obtained at least a temporary mitigation of the symptoms, relieving, for a time, the excruciating pains, and restoring disordered intellect. I re-

gret to say, however, that it did not always save the patient : for the pains, &c. would frequently return, and falling suddenly with fury on some vital part, (generally the brain,) relieve the patient from all future suffering. All the cases which terminated favourably, were bled freely ; and I never had reason to regret using the lancet, though I had for forbearing its use. If a full, frequent, and tense pulse did not indicate it at first, the use of that remedy would produce that indication, so that the state of the pulse could not always be relied on, since the most opposite states called for the same remedy. It was an excellent plan to bleed for pain, although no other symptom should indicate it. Never shall I forget the relief from pain I myself experienced from its use.

*Emetics*, which have been generally decried in this disease, I used in two cases without any disadvantage ; both of which recovered. I am, however, by no means inclined to recommend the practice. *Cathartics*.—The obstinate constipation of the bowels called for powerful and repeated purges, as well as enemata. For the former, the Sub. Mur. Hydrarg. and Jalap, I found the most effectual, and in much larger doses than ten grains of each. I gave to one patient the amount of two drachms at one dose,—he recovered with a slight ptyalism and purging. I most commonly resorted to it ; and if it produced both these effects, so much the better. By giving the medicine in these large doses, I did not find the chance of producing ptyalism so much diminished as is generally supposed. It often occurred, indeed, although vomiting was in the first instance induced. But I did not depend so much on ptyalism towards the close of the season as at first, it not having answered the expectations I had been taught to look for ; and I regret to say, that it did not always save the patient,—for sometimes it produced an ulceration of the gums, which was always fatal ; and in several cases, where the mercurial action had taken place, and no ulceration followed, the patient sunk under a renewed assault of fever, the ptyalism receding, notwithstanding



calomel was continued. These cases induced me to think, that where ptyalism follows the diseased action, and a recovery succeeds, the mercurial, occurs only because no longer opposed by its adversary; and that *post hoc ergo propter hoc*, is too often applied here, as elsewhere. It appears doubtful, at least, how far we may calculate on the mercurial agency to produce a solution of the fever; and that when its peculiar effects are substituted for the disease, they are not always powerful enough to prevent its recurrence.

The ptyalism itself, is to be considered rather as an effect than a cause; and, as such, indicates the absence of the disease for the time. It may be suggested too, perhaps, that where it has not the power to overcome and substitute its own peculiar action in place of the diseased one, that, like every other stimulant, it may add vigour to the disease.

I do not wish to depreciate this "Sampson of the Materia Medica, but merely to suggest my want of dependence on it in all cases of this fever. A more extensive observation may, perhaps, change these views. Purging, kept up until the stools became light coloured, was always necessary; for which purpose the calomel was the best, and next to that the Ol. Ricini. Saline purges did not appear to be of service: they debilitated the patient, without evacuating the foetid contents of the intestines. Calcined magnesia proved of essential service in obviating the effects of the acrid matter ejected from the stomach, on the fauces, and perhaps to on the stomach and bowels.

*Enemata* were of great service in giving the first impulse to the cathartics, as well as in keeping up the evacuations; yet to trust to them entirely, would prove fallacious. The common brown turpentine soap was very useful, used in this way; and the Ol. Terebinthinæ was also serviceable in the latter stage.

*Cold Affusion.*—At the instance of my friend, Dr. Mercer, I made use of this remedy twice in my own case, and

found it exceedingly grateful, as well as beneficial, by easing the pain, and carrying off the superabundant heat of surface. But owing to the diminished temperature of the skin, so general that season, it could not be applied to most of the patients. I used it but in one case besides myself, in the city, and in three others going down the river on ship-board; in two of these the heat of the skin was great. In both of them, I was disappointed in its effects; in the one it produced chilliness, and in the other nausea, with slight mitigation of the symptoms; which however resumed their march with the usual malignancy. In the other two, it produced evident and prompt advantage, in the relief of all the symptoms.

“Blisters,” as says Dr. Rush on the fever of 1797, “were applied as usual; but from the insensibility of the skin, they were less effectual than applications of mustard to the arms and legs,” although applied to the epigastric region. When they did vesicate, they relieved the nausea, vomiting, and pain. Stimuli were frequently of benefit in the latter stage, and of these the most diffusible. The *Ol. Terebinthinæ*, with Musk, was used with success in one case by a skilful practitioner. The effervescing draught, *Carb. Ammoniacæ*, and *Rad. Aristoloch. Serpen.* were of service in this stage; but the mixture of *Magnesia* with *Succ. Limon.* and the *Spirit. Mindereri*, by no means appeared efficient. Some physicians informed me, that they had used the camphorated mixture with benefit. These, with milk punch and ether, when the patient appeared to be sinking under this direful malady, would light up the spark of life; but in general, it was only a temporary appearance, which was soon extinguished for ever.

*A Historical Sketch of the Endemic Yellow Fever, which prevailed in the city of New-Orleans in the summer and autumn of 1819, by DUPUY DE CHAMBERY, M. D. Secretary of the Medical Society of the State of Louisiana; addressed to FELIX PASCALIS, M. D. Corresponding Secretary of the Medical Society of the City of New-York, and Honorary Member of the Medical Societies of Paris, Marseilles, &c.*

*Read before the Medical Society, September 11th, 1820, and ordered to be published in the Medical Repository.*

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TRANSLATED FROM THE FRENCH.

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I. THE city of New-Orleans combines so many causes favourable to the generation of yellow fever, and other diseases of the most malignant type, that it is to be feared that no regulations of health, or police restrictions, will be effectual in securing the inhabitants against their recurrence. Its site is an immense alluvial deposite of mud, but a little above the level of the ocean, nearly surrounded by water, and during a great part of the year, from six to twelve feet below the level of the Mississippi. The city is surrounded by forests and marshes, which swarm with reptiles and insects. The streets are not paved. The houses, for the most part, are of one story, and nothing but a plank floor separates the occupants from the marshy ground, upon which these buildings are erected. The yards are in the same condition, and seldom dry, except during the hot season. The filthy water from the private dwellings is collected, and frequently remains stagnant in canals or ditches, lined with logs, or decayed plank covered with moss, and the whole rendered more noxious by the accumulation of various corruptible materials. It is therefore evident, that such a state of things, subjected to an atmospherical temperature that frequently ranges between

90° and 102° Fahr. must produce deleterious exhalations, which will create malignant fevers; although the ingenuity of the inhabitants, guided by motives of self-preservation, may in future times mitigate their calamitous effects.

II. I have lived in this place three years, and seen the yellow fever prevail endemically in 1817, sporadically the year after, and endemically again, the last year (1819); when it raged most extensively, and committed great ravages. In this last year, it appeared early in the month of May, under an atmospherical heat of about 76° Fahr. and continued, during this and the succeeding month, to prevail sporadically, when a great fall of rain, followed by excessive heat, suddenly spread the disease in every direction; principally affecting foreigners. At this time, immense swarms of various insects made their appearance. The disease continued to rage with great violence, and committed great havoc, from the middle of July to the end of November; after which it gradually subsided, and finally totally disappeared by the end of January, 1820. The disease was most malignant when it attacked new-comers from the Northern States, or from Europe; and about three-fourths of these cases terminated fatally, most commonly on the fifth or seventh day. Of this description of people, all ages, sexes, and temperaments suffered without discrimination. In them, an attention to regimen, the employment of prophylactics, seclusion, or even the presence of a chronic discharge, did not appear to be of any avail in warding off the disease. The natives of the adjacent country, who had chosen the city as a residence, as well as the citizens, were subject to the disease; but of this class, the females and children were much the most susceptible. These cases, however, were generally milder, and a much larger proportion of them recovered. In short, the disease was more malignant and fatal in proportion as it attacked individuals from more northern climates, whilst the inhabitants of the windward islands came and resided amongst us without inconvenience. A few of the people of colour, who



had been waiting on some of the worst cases, in confined apartments, were attacked with febrile symptoms, somewhat resembling the reigning endemic ; but their ailment did not amount to yellow fever. It was usually tedious, but seldom fatal.

It is very remarkable, that during the existence of this calamitous endemic in New-Orleans, which proved so fatal to strangers, a different disease of a putrid type, probably Typhus Mitior, prevailed in the adjacent villages and counties, where it attacked indiscriminately the white and the black. It was of long duration, and generally yielded to medical treatment. At the same time, the yellow fever broke out at Mobile, and made great havoc.

III. I shall not here undertake to describe the yellow fever, the character and forms of which have been delineated by so many experienced physicians in their instructive treatises ; I will only observe, that it runs through three distinct stages or periods. The first is ushered in abruptly, with symptoms resembling the labour of an indigestion, and assuming, immediately after, the character of a bilious inflammatory fever. The second stage is marked by a deceitful remission, which is soon followed by various nervous affections, as tremour, delirious perceptions, &c. and continues from the third to the fifth day. In the third stage, there is great sinking of the pulse, with hemorrhages, suppression of urine, and other symptoms of the same kind. These stages sometimes succeeded one another so rapidly, as to be confounded, when the prognosis was very unfavourable, death in these instances often supervening in 24 or 48 hours. It was very remarkable, that many patients retained their muscular powers unimpaired to the very last moments. The fever seldom continued beyond the ninth day ; and if the pulse was full and regular in the second stage, and continued so to the third, the patient was usually safe.

IV. No mode of treatment that I used or heard of, appears to me to merit a decided preference. The rational,

the emperical, and the violent methods, each in their turn, have failed. I employed venesection in robust and vigorous subjects, without success ; and am satisfied, that when it is employed late in the disease, it only hastens on the prostration of the last stage, which no stimulant or tonic remedy will be able to overcome. Other antiphlogistic means and emollients were employed with no better success. I endeavoured to excite a speedy salivation by the rubbing in of Ung. Hydrarg. for. ʒiiss. twice a day, but it only tended to excite a violent diarrhœa, and hasten the fatal event. Several practitioners had recourse to different baths, but to no remarkable purpose. Rubifacients, and the most active tonics, could make no impression on the pulse, when it had sunk and become small, irregular, gaseous and slow. The different mineral acids, serpentaria, cinchona, spiritus mindereri, Huxham's tincture, &c. severally exercised the confidence of warm partisans, but equally failed. I found, however, that some small degree of preference might be given to the following saline and diuretic mixture, employed in the first days of the disease :

R. Sulph. Magnes. . ʒiiss.

Sup. tart. Potass. ʒiij.

Nitr. Potass. . ʒi j.

Syrup, q. s.

Aq. Fontan . . Oiss F. M. pro haustu Sæpius in die.

At the same time, I applied oily frictions to the abdomen, ordered an emollient enema every evening, and gave for ordinary drink barley water, acidulated with vinegar, lime juice, or nitric acid. To allay the vomiting, opium, musk, ether, and carbonic acid gas, were resorted to without benefit. The use of blisters seemed to aggravate the malignant symptoms. Hemorrhages were much more frequent than during the prevalence of this disease in 1817. I regret that it was not in my power to make autopsic examinations.

V. I formerly believed the yellow fever to be contagious, but since I have been in the midst of it, my numerous

practical observations have never been able to furnish me with one proof of this much dreaded attribute. Indeed, the result has been quite the reverse ; and I am now convinced that the disease is permanently fixed to the spot, and within the limits of the place which has created it. Not one case of the disease occurred beyond the limits of the city during its prevalence in the years 1817 and 19, that could be traced to any of our innumerable patients, although a daily intercourse was kept up with the people of neighbouring estates and plantations. A great number of our inhabitants, who carried the seeds of the disorder abroad, seeking refuge at a distance from the danger, suffered an attack of the fever and died ; but in no instance was it communicated to their friends. Fifty times have I had my hands and face besmeared with the putrid blood, black vomit, or the fœtid, slimy matter of perspiration ; fifty times have I been immersed in the effluvia issuing from a dead or living subject, and never been infected by the disease. From extensive observations, I infer that the yellow fever of this place is a disease *sui generis*, the product of local causes, and neither contagious nor exportable. I also conclude, that no mode of treatment has been sufficiently successful to give it a decided preference. Flight from the infected spot is the only certain preservative ; and a distance of three miles appears to be quite sufficient to inspire the fullest confidence.

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## REMARKS

### *On the Modus Operandi of Ergot in Parturition.*

BY A. W. IVES, M. D.

THE use of the Ergot, to facilitate parturition, was first recommended to the profession in this country in 1807, by Dr. John Stearns. It immediately became an object of inquiry, whether that substance actually possessed the

powers ascribed to it, of increasing the contractions of the gravid uterus. From that time to the present, its efficacy has been tested, and generally acknowledged, by a majority of the physicians in the northern and eastern sections of the Union. No sooner was it found efficacious in shortening the process of protracted labour, than it was administered, by many, without weight or measure, and to patients without regard to their condition or safety; for the enthusiasm, excited by its uniform and vigorous action in parturition, though it foresaw, in imagination, its wonder-working powers in various uterine diseases, was blind to the injurious consequences of its indiscriminate prescription: and thus, while its medicinal virtues were raising it rapidly to the highest popularity, its abuses were creating prejudices which were soon to deny its utility, and condemn it as an uncontrollable and dangerous remedy.

Such will ever be the infatuation, on the introduction of a new and potent medicine. Before its virtues can be accurately ascertained, and precisely estimated, it must be subjected to inordinate and indiscreet use; and as in some diseases it will prove injurious, and under some circumstances appear inert, it will generally be discarded for a while (after having been once too highly extolled) as a remedy of hazardous operation or of doubtful efficacy. In the dangerous, but necessary progress of experiment, the Ergot has passed the maximum of its reputation; and its claim to a place in the *Materia Medica* is, by some, already disputed. My present design is not to eulogize its medicinal virtues, but so to describe its operation, as to show, that incorrect theory and injudicious practice, are unjustly bringing a valuable medicine into disuse. The influence of Ergot on the uterus is now so uniformly acknowledged, by those who have prescribed it, that, to multiply testimony to establish this fact would be superfluous. I shall proceed to make some remarks on the mode of its operation; shall inquire what circumstances are most suitable to its use; and whether, independent of what may be denomi-



nated its specific properties, it possesses powers deleterious to the fœtus in utero.

I would here observe, that I first began the use of Ergot about four years ago, since which I have frequently prescribed it in parturition, and in various forms of uterine disease; but the following observations are not the result of my limited practice only, but such as have been confirmed by the experience of many of my most respectable professional friends.

The earliest advocates of this medicine were of opinion, that besides contracting the uterus, it produced effects analogous to those of blood-letting. Dr. Stearns, in his communication above alluded to, (Med. Repos. vol. 11. p. 308) says, "At the same time the Ergot augments the action of the uterus, it appears to relax the rigidity of the contracted muscular fibres;"\* and Dr. Foot states, (Med. Rep. vol. 17, p. 272) that, "in addition to the force and frequency of the pains," produced by it, "there is an evident diminution of resistance to the progress of the fœtus," and that "an accoucheur, noticing the sudden and free relaxation consequent upon the Ergot, and to a degree apparently disproportionate to the parturient contractions, is reminded of the efficacy of narcotic and nauseating medicines in dislocations of difficult reduction." To reconcile the mysterious, two-fold action, which was thus attributed to the Ergot, it has been contended, that it operates on the uterus *sympathetically*, affecting *primarily* the stomach; in proof of which, was adduced the nausea and vomiting that frequently follow its use. I am fully persuaded, that this opinion of the action of the Ergot is exceedingly erroneous, and that the fatal consequences, which have sometimes resulted from it, have been owing to these mistaken views of its *Modus Operandi*. The great changes which necessarily take place in the parts concerned in delivery, on the

\* It is due to Dr. S. to mention, that from more extensive observation, he has been induced to renounce this opinion as incorrect.

sudden expulsion of the child, doubtless gave rise to the belief that this medicine produced muscular contraction and relaxation at the same moment ; but further observation has shown, that this opinion is as incorrect in fact as it is inconsistent in theory. But were we to grant the supposition, that the Ergot operates primarily on the stomach, it would not account for the effects which have been imputed to it. There are no particular muscles which are exempt from the influence of general causes ; nor can it be conceived that the contractions of the uterus can be invigorated by any means that shall, at the same time, relax the contiguous parts. But it is unnecessary to prove the logic fallacious, while the premises are false ; and it is confidently asserted, that there is little or no relaxation produced by the Ergot, and that its effects are in no respect analagous to those of blood-letting. There is an intimate sympathy between the uterus and the stomach, which is particularly manifested during the periods of gestation and parturition. When the stimulus of distension is most powerful in the former, there are frequently nausea and vomiting from the sympathetic action of the latter.

I believe, therefore, that the operation of the Ergot on the uterus is neither compound nor indirect, but that it excites that organ to action by a specific virtue, only known from its effects : as, Ipecac excites the action of the stomach, Jalap that of the intestines, and numerous diuretics the kidneys ; and that from this simple view of the subject, may readily be explained all the phenomena that have resulted from its use.

How far the action of the Ergot on the uterus is dependent on a peculiar susceptibility of that organ, during labour or disease, observation has not enabled me to determine ; but from its having sometimes failed to produce any obvious effect in cases of amenorrhæa, I am disposed to believe that a preternatural irritability of the womb greatly favours its operation. The effects of medicine on the human and brute creation, are frequently so various, that from the ex-

periments which have been made on animals, we can draw no satisfactory conclusion.

It was early suspected, that though the Ergot had a beneficial effect in relieving the mother, it possessed properties dangerous to the life of the child. This suspicion has been strengthened as the medicine has been more generally and more indiscriminately used. By some writers, it is stated, generally, that since its introduction, there have been more still-born children than formerly; by others, that the powers of infant life appear to be weakened or suspended by it; while others have declared boldly, that it frequently caused the immediate death of the child. I recollect to have heard it asserted, by one of the most distinguished physicians in our country, that, in his own practice, it had proved fatal to no less than three children; and that he was determined never to use it again. It was said that the Ergot excited a direct and deadly influence on the life of the child, and, therefore, that it must ever be considered as a hazardous remedy.

The most decided advocate of this opinion, is Pierre Chatard, M. D. of Baltimore; in proof of which, he has related twelve cases (all that he has treated with this medicine) in the 20th vol. of the *Med. Repository*, p. 11. That the use of Ergot has sometimes been attended with consequences fatal to the child, there is little doubt; and as the principle object of this paper is to prove that they were not produced by the virulent properties of the medicine, but by the mechanical action of the uterus, I shall briefly review the most important cases of Dr. Chatard, as they appear to me to be highly important, if not decisive, in solving this interesting inquiry. The limits of this communication will prevent my giving them in detail; but it is intended to make such extracts as shall fairly represent them, without injustice to the author.

The Doctor says he commenced the use of the Ergot with the hope of participating in the happy task of effectually remedying the pangs and cruel moments of child-

bearing. With our present views of the medicinal powers of the Ergot, we cannot be surprised, that, with such expectations, Dr. C. should have been unhappily disappointed.

It would seem that he supposed the Ergot suitable and safe in every case, and in every stage of labour, where the presentation was natural: an inference which obviously results from the original theory of its *Modus Operandi*.

The first case had lasted 24 hours, and *did not progress*. After giving 30 grains of Ergot in infusion, in half an hour, no acceleration having satisfied his expectation, he irritated by friction the *os tincæ*; after which, lively contractions took place, and the woman was delivered of a dead child. The Doctor thinks, that in this case, the parturition was determined by frictions on the *os tincæ*; but that he is authorized to attribute the death of the child to the operation of the Ergot. From the first expression quoted, we are warranted in the belief that the Ergot was given before the dilatation of the *os uteri*; and that the lively contractions which followed half an hour afterwards, was the effect. If so, and the child were alive when the medicine was given, it was probably destroyed by its agency.

In the third case, Mrs. B. had been in labour with her first child 48 hours. The *os tincæ* was opened less than a two shilling piece. The uterus was evidently in want of regular action. *Thirty grains* of the Ergot was given in powder at a dose. In a quarter of an hour violent pains succeeded to each other. They continued during two hours, but procured a very inconsiderable progress of the head, which remained in a good condition. Vomiting succeeded without any further advance, although the pains continued distressing for 12 hours longer. I hoped no longer to deliver her in the natural way, and yielded to her request of employing the forceps. Just as I commenced the operation, she was violently convulsed; and in an hour she experienced three fits, notwithstanding two copious bleedings during the interval of half an hour after the



first convulsion. "Suspecting the child to be dead, it was extracted with crotchets." This was a dangerous, but important experiment. Whether, after copious bleeding, and the complete dilatation of the os uteri, the patient might not have been benefited by an *ordinary dose* of the Ergot, it is impossible now to determine; but given in the quantity, and under the circumstances related, I conceive the author to be perfectly correct in supposing that "the case shows evidently the operative properties of the Ergot,—that it provoked alarming convulsions, and produced dangerous consequences;" and, had he added, the death of the child, I should have readily assented to his opinion.

#### CASE IV.

"Mrs. H. for the tenth time in child-bearing, had lingered 24 hours without any decisive progress. An infusion of the Ergot was prescribed every ten minutes. At the third dose, the pain through the abdominal region became shockingly excessive, and in three hours and a half she was delivered of a living child." The author observes, this remedy did continue to operate on the uterus and external parts, which became tumefied, livid, and painful. The patient complained also of much giddiness and headache, and was not relieved, till she had spontaneously and copiously vomited.

This case shows, in addition to the effects of the Ergot, ordinarily noted, the consequent state of the soft parts; and I doubt not, but correct observation and minute description would show, that such are always the effects, when the medicine is administered under such circumstances.

#### CASE VI.

Mrs. L. aged 27 or 28 years, had been in labour with her first child 24 hours. The uterine dilatation was not larger than a two shilling piece. "In this case," says the Doctor, "I should have preferred bleeding to any other re-

medy." I administered in two doses, at ten minutes interval, thirty grains of the *spurred rye*. In 20 minutes, it had much dilated the uterine orifice, the pains increased, and labour was accomplished in an hour and a quarter. "The child was born *asphyxiated*. Although he lost blood from the funis, as much from design, as from accident, he could not obtain the faculty of breathing till several hours after birth."

#### CASE VII.

"A young woman had<sup>d</sup> been in labour many hours, without much distress. Although when I arrived, pains were more frequent and sharp, [than they had been] I did not hesitate to administer the *spurred rye* in the ordinary method, *because the os tinæ was very little dilated*, and thereby I could better observe its progress. In about 20 minutes after the third spoonful, the pains grew intense, and the opening larger. The contractions were steadily kept up, and delivery took place half an hour after the last infusion. The child was also still-born."

In the 10th and 12th cases, the Ergot was administered under similar circumstances. In the 10th, the Doctor says, "the uterine orifice was scarcely opened." In both instances, the children were also "asphyxiated."

Such were the fatal experiments of Dr. Chatard; from the result of which we are called on to denounce entirely the use of Ergot. From a careful perusal of the whole paper, it would seem, that he commenced the use of this article with perfect honesty of intention, and his cases are apparently related with the utmost candour and fidelity; but his views of its *Modus Operandi* were probably those suggested by its earliest advocates, which, as has already been observed, we consider dangerously erroneous. The inference drawn by Dr. C. from his own practice, I conceive to be, in some respects, correct; but others, of vast importance, are unquestionably ill-founded. His conclusions are, that its operation is "that of a tonic, and cer-

tainly opposed to that of blood-letting. That where there is a susceptibility of the uterus to the operation of Ergot, it produces a prompt contraction, sometimes beneficial to the mother, but that *it possesses a deleterious property, always highly dangerous to the child.*" This opinion, of the direct and poisonous effect of the Ergot on the fœtus, as I have before stated, is not new; and though it has ever been contradicted by circumstantial testimony, nothing has before appeared to demonstrate so completely the fallacy of the doctrine, as the experiments which have now been related. They do indeed show, satisfactorily, the uniform and powerful efficacy of the medicine in expelling the fœtus; and not less conclusively to my mind, that though it sometimes destroys it, it is not by poisoning, but by the mechanical action, induced in the uterus. Certainly the habit and condition of Dr. C.'s patients rendered them the most unfavourable subjects for the beneficial agency of the Ergot, which he could have selected. It is granted, that in none could he have better shown the active properties of the medicine; but with the exception of the ninth case, in which, says the writer, "in one hour it effected a very regular labour," he has not related one in which its use was indicated; nay, not one, where it was not by the condition of the patient forbidden. In the first place, it is questionable whether the natural process of regular labour can, by any means, be advantageously shortened by the interference of art. Secondly, it is only in long protracted or tedious labours, and in such of those only as depend on the exhausted or inactive state of the uterus, that the Ergot *should* be administered. But the Doctor, desirous of ascertaining the operative effects of a new remedy, seemed to disregard or neglect these considerations; for it will be recollected, that in the seventh case he says, "I gave it because the os tinæ was very little dilated, and thereby I could better observe its progress." If from such experiments the Ergot is to be abandoned for its deleterious effects, why not discard also the use of the forceps? might they

not be made too the instruments of death to both mother and child? As well may we denounce the use of opium, because it aggravates an inflammatory fever, and in inordinate doses, destroys life.

However unhappy the issue of Dr. C.'s experiments, it is the privilege and the duty of the profession to profit by them; and I can hardly resist the belief, that, if duly considered, they will establish the character of the Ergot, as an efficient and valuable agent in some cases of protracted labour. That it has sometimes been destructive to the child, is proved beyond question; but is it not conclusively proved, that this fatal effect was caused by severe and long continued pressure, kept up by a too powerful contraction of the uterus.

An important part of the natural process of parturition, is the relaxation of the soft parts of the mother, and the adaptation of the child's head to the pelvis, both of which are frequently essential to the safety of the tender infant. These effects are the work of time; and it is not surprising, that a premature interference of art, which produces the most violent and unceasing contractions of the uterus, should thereby suspend or destroy the life of the fœtus.

But were we to condemn as unfit for use every medicine that has, in "rash hands," or "in evil hour," been productive of aggravated disease or untimely death, what should we have left worth possessing? I think we are justified in the conclusion, that the Ergot is not only a powerful medicine, but that in skilful hands it is a safe and useful agent in various diseases incident to parturition.



AN ESSAY

*On the Modus Operandi of Iron, chiefly as respects its efficacy in Scrophulous Complaints ; by F. G. Willemoes, M. D. of the Royal Medical Society of Copenhagen.*

*Translated from the Latin, for the Medical Repository, by EDWARD W. WELLS, Student of Medicine.*

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(Continued from Vol. v. p. 386.)

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I HAD almost said, that the peculiar nature of scrofula was involved in Cimmerian obscurity, notwithstanding the well directed labours of the celebrated Hufeland and others in its investigation. From a consideration of the foregoing inquiry into the nature of cancer, I am led to believe that scrofula is a departure from a healthy state of the lymphatic system, similar to that which takes place in carcinoma, or rather scirrhus, at an age exceeding forty years ; with this difference, however, that in the former disease, the powers of nutrition are, by reason of the juvenile age, increased ; and diminished in the latter : and my opinion is, that iron acts by regulating that power. The following case, if viewed in a proper light, will be an argument in favour of that opinion :

A boy, aged 12 years, had, from his earliest infancy, been labouring under a scrophulous diathesis ; and this, for two years before I saw him, had so much increased, from poverty and its consequent miseries, that all the glands of the neck, internal as well as external, had become enlarged, and the hectic habit was progressing with rapid strides. During the last year, mercury, muriate of barytes, and other supposed specifics for scrophula, were employed without any benefit. The disease continued to increase ; the glands of the neck suppurating one after the other, exhibited phagedænic ulcers. When all hope of recovery was abandoned, and the child's mother considered the case

desperate, I took charge of the patient ; and finding that the child's diet did not require to be restrained, as it was already sufficiently frugal, I prescribed the internal use of the carbonate of iron, to be taken at intervals three or four times a day, gradually increasing the dose to 50 grains *per diem*. I ordered the ointment of red precipitate, which had heretofore been applied to the ulcers, without benefit, to be removed, and directed that they should be sprinkled with finely levigated carbonate of iron ; lint wet with a solution of the sulphate, to be applied over them, and these dressings to be renewed twice a day. For the first two weeks, I observed scarcely any change in the child's constitution, or in the character of the ulcers ; but towards the expiration of a month, he appeared much more sprightly ; the livid circle about the lower eye-lids was less conspicuous, the abdomen was not so much swelled ; the cheeks became plump ; the colour returned in the face ; and the strength, which from the debilitated state of the process of nutrition, occasioned by the atony of the digestive apparatus, had been almost destroyed, now increased every day. A thick squamous eschar was gradually formed on the ulcers ; when this sloughed off, it left them in a better state, and under it, when renewed, they healed so fast, that in a month's time (the third from the commencement of the treatment) I dismissed the child cured. There remained irregular cicatrices, and some indurations in the circumjacent cellular tissue, occasioned by the constant irritation of the ulcers ; but I had hopes that these would disappear as the child advanced in age, and would not impede the motion of the neck.

Another case, which came under my observation, persuaded me that a scrophulous diathesis, which is manifested by well-known diagnostic symptoms, (principally the general habit, and chronic glandular tumours) by reason of the affection of the abdominal lymphatic system usually attending it, is favourable to the procreation of various sorts of intestinal worms. When this primary disorder of

the digestive apparatus is by its progress communicated to the nervous system, it creates what is called the worm fever, which might more properly be denominated a hectic scrophulous fever, or fever of the digestive system. The subject to whom I have reference, was a boy of a delicate constitution, three years of age. His leucophlegmatic habit showed a primary affection of the digestive organs. The symptoms of the disease, (in exploring which I was not very anxious, as from antecedent causes, as depraved food and air, and the general habit, I could already suspect them,) were of that class which are commonly supposed to attend a complicated state of scrophula, worms, &c. ; or, in one word, *cachexia*. The child had, besides, behind the right ear, near the mastoid process, a cancerous phagedænic ulcer, of the size of a crown piece, that penetrated the bone. The glands of the neck were so swelled as to cause great difficulty in swallowing. His body was emaciated, and he laboured under an intermitting hectic fever. I prescribed the same remedy in this, as in the preceding case, but in different doses. In six weeks I had the pleasure of seeing my little patient convalescent. From the increase of tone given to the digestive organs, by the use of chalybeates, worms had been discharged from the intestines. This taught me, that if I should meet with a case in which there were symptoms of worms, without any appearance of scrophula, I should be authorized to give the carbonate of iron as a remedy, whether it acts as a poison on the worms, or expels them, by altering or increasing the action of the digestive and lymphatic system.

There has been a great difference of opinion respecting the *Modus Operandi* of iron, each author deciding in favour of the system that he preferred. The ancient Greek physicians extolled the carbonate of iron as an astringent remedy in menorrhagia, dysentery, &c. Their followers, even to the present day, have very properly attributed to it, astringent and aperient virtues, as its name, *crocus martis aperitivus*, shows. Brown's system derives the effects of

iron, from its power of corroborating and increasing the tone of the system. In this way only the astringent property attributed to it by the ancients can be explained. The aperient operation of this remedy in disorders of the lymphatic system should, on the contrary, place it in the Asthenic class; and unable to explain this, the disciples of Brown, in neglect of all experience, have preferred to remain silent on the subject. Since the time that it was observed the blood contained particles of iron,\* the internal use of that metal has always been supposed to increase them, and therefore to possess the power of recruiting and correcting the blood. The eminent Dr. Brandis, from his experience in the use of chalybeate preparations, and especially mineral waters, defended the above opinion, when he observed the florid colour, and consistency, which was given to blood by iron dissolved in carbonic acid gas. He was by that experiment induced to believe that iron was as much a specific in chlorosis, as cinchona in intermittent fever, &c. But this effect upon the blood can be considered as secondary only, and occasioned principally by the preceding process.

According to the doctrines of natural philosophy, employed in the modern medical schools of Germany, to explain phenomena occurring in the practice of physic; the metals preserve a certain order, according to their degree of coherency: thus *uranium* obtains the highest place, *mercury* the lowest, and *iron* the middle. According to this rule, iron and mercury are opposed to each other, and when the one metal is indicated, the other is contra-indicated; for instance, in inflammation, where the cohesion of the system is increased, mercury is very useful, but iron is not, and vice versa, as is well ascertained by experience.

\* Carmichael calculated, from the experiments of Menghini, that in a healthy adult, there were 2 1-2 oz. of ferruginous particles, and supposed them to be of the greatest importance in the animal economy, for the preservation of life and the prevention of diseases occasioned by parasitic animals.



If these general notions may be applied to particular cases, to illustrate the cause, why iron should be indicated in primary disorders of the digestive apparatus, as experience shows it is ; the principles of the above theory suggest to us the following conclusions : that magnetism, electricity, and chemical process, are the three momenta of inanimate nature. These in the animal system are carried into the functions of digestion, irritability and sensibility. Of these, digestion answers to carbon in inanimate nature ; irritability to hydrogen ; and sensibility to azote ; and in the direct ratio of these, revolve the health of the systems, the disposition to diseases, and disease itself. It follows, therefore, that remedies should be chosen from the kingdom of nature, which, like substitutes, may answer to the deviation from a healthy state, of the systems of the body.

Thus experience has constantly proved, that in disorders of the digestive apparatus, in which the process of assimilation is debilitated, those remedies are the most efficacious in which carbon prevails, as opium, cinchona, bitters, &c. ; and as a particular remedy removes a like state of disease, carbonic remedies are indicated in a debilitated state of the digestive functions. Iron, therefore, as it represents magnetism in inanimate nature, and is peculiarly carbonic, ought to hold a high place among the remedies against disorders of the digestive system ; and as it exhibits magnetism in the purest and most perfect manner, it ought to be considered the most efficacious medicine to support and restore the diminished magnetism of the system ; as in a weakened digestion, and the diseases thence arising, *chlorosis*, *scrophula*, &c. This doctrine of the natural philosophers, concerning the efficacy of iron in primary diseases of the lymphatic system, produced by a depraved state of the digestive organs ; [as in the last stage of *chlorosis*, where it appears about to degenerate into dropsy ; of which I have seen striking instances:] answers well to my experience of the efficacy of the medicine in *scrophula* ;

and it is without doubt worthy of greater consideration than Carmichael's system of parasites or hydatides, which he might as well have applied to scrophula as to cancer.

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*Observations on the TUCKAHOE, or Indian Bread of the Southern States, in a Letter to S. L. MITCHILL, M.D. Pres. of the Lyceum of Nat. History, and Proff. Mat. Med. and Botany in the University of the State of New-York, &c. by JOHN TORREY, M. D.*

*Read before the Lyceum November 19, 1819.*

Communicated for the Medical Repository.

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*New-York, November 10th, 1819.*

SIR,—According to the promise I made you some time since, I communicate to you some observations on the vegetable production of the Southern States, known by the name of Tuckahoe.

This substance was first described by Clayton in his *Flora Virginica*: it is there called *Lycoperdon Solidu*. From the time of Clayton till your observations were published in the 15th vol. Med. Rep. I cannot find that this remarkable production has been noticed by any writer. Barton, in his *Collections*, mentions that the roots of the *Smilax China* [pseudo China] are used as food by the Southern Indians: but whether they are the same as the Tuckahoe, we can only conjecture. In May, 1817, Dr. Macbride, of Charleston, S. C. communicated a memoir on this substance, to the New-York Philosophical Society. This paper is not yet published, but an abstract of it is inserted in the first volume of the *American Monthly Magazine*. Though the Tuckahoe is quite common in the Southern States, its natural history has been much neglected. Its name in the Indian language is said to designate *bread*, though it is also applied to other edible roots. It is met with under ground,

from 2 to 3 feet beneath the surface ; its form, for the most part, is globular, and its size varies from that of an acorn, to the bigness of a man's head. Sometimes it is found emerging from the ground, and exposing a small part of its surface. When first dug up, it is said to be soft enough to be easily cut with a knife, and of an acrid taste. Its colour, internally, is white, and its texture compact and homogeneous. It is covered with a tough internal substance, strongly adhering to the *parenchyma*, of a dark brown colour, much corrugated. When dried, it becomes hard, and loses its acidity. Most of its other characters are retained. In this dried state, it has very little taste or smell, and may without much difficulty be reduced to powder.

When the Tuckahoe is examined by the microscope, it exhibits no traces of organization ; no fibres or pores are found. It breaks as freely in one direction as in another. These characters, with the peculiar nature of its bark, induce me to consider it as a cryptogamous plant of the *Fungus* tribe.

In those parts of our country where the Tuckahoe abounds, it is generally supposed to be the root of the *Convolvulus Panduratus*, called in this neighbourhood the *man of the earth* ; but Dr. Macbride and Mr. Le Conte, who have both examined this substance in its native state, are decidedly of the contrary opinion. Roots of the *Convolvulus*, which I have examined, were altogether unlike Tuckahoe. Mr. Le Conte informs me that it is also believed by the natives at the South to be the roots of the *Dioscorea villosa*, an opinion not more probable than the other.

Dr. Macbride, in his memoir, endeavoured to prove what Clayton first thought this substance to be—that it is a proper *fungus*, and not the *root* of any vegetable ; and most of the botanists of the south, and others who are competent to judge, are of the same opinion.

Mr. Rafinesque thinks that this fungus belongs to an entirely new genus ; and he thinks he has discovered its

organs of reproduction imbedded in its bark in the form of buds. These, however, I have not been able to find.

Dr. Macbride has not given his opinion respecting the proper genus or species of this fungus; his observations having been made to ascertain whether, as had been questioned, it was attached to the roots of plants, or whether it had an independent existence. He was inclined to adopt the former opinion, in which he is supported by the observations of Mr. Le Conte. The fine specimens presented by Dr. Macbride to the Philosophical Society, seem to confirm this opinion, as several of them have the roots of plants running through or adhering to them.

It would be difficult to find a place among the Linnean genera of fungi for the species in question. It has been referred to *Lycoperdon*, and also to *Tuber*. To the former it has no resemblance, and from the latter it differs in not having seminiferous veins within; however, so little was known of the fungi before the appearance of the *Synopsis Fungorum* of Persoon in 1801, that this tribe of the Cryptogamia was in great confusion. In this arrangement the Tuckahoe must be considered as a *Sclerotium*, which genus is placed by Persoon among the *Angiocarpi*, or those fungi which bear their seed internally. De Candolle, however, in a monograph of the genus lately published in the *Memoires du Museum d'Histoire Naturelle* of Paris,\* has proved that the *Sclerotium* belongs to the *Gymnocarpi*, or those fungi having external organs of reproduction. (*spori*.) He places it between *Elvella* and *Clavaria*, though it is much more nearly allied to the latter. Persoon's generic character of *Sclerotium* is as follows: "Farctum, forma varium, intus læve simulare, externe in nonnullis demum Corrugatum." Sixteen species are described in the *Synopsis Fungorum*, but the number is now augmented by De Candolle to thirty species: some are subterraneous, one or two

\* I regret that it has not been in my power to see the original paper of De Candolle: I have only seen an abstract of it in Brand's Journal,



grow on the surface of the earth, and most of the rest are on different parts of dead or living plants. Our Sclerotium is so distinct from any described by Persoon, that I propose it as a new species, under the name of *S. giganteum*, although I am not certain but that De Candolle has described it in the monograph alluded to. The following is its diagnosis :

*S. giganteum*, subterraneum, solitarium, subglobosum, durum, intus album, externe cortice corrugato, suberoso, nigrescente spadiceo tectum.

Inhabits from Virginia to Florida, under ground, on the roots of trees.

I am, &c.

J. T.

SAMUEL L. MITCHILL, M. D. &c.

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### ANALYSIS

*Of the SCLEROTIUM GIGANTEUM, or TUCKAHOE, by JOHN TORREY, M. D. in a letter to SAMUEL L. MITCHILL, P. L. N. H.*

*Read before the Lyceum November 29, 1819.*

Communicated for the Medical Repository.

*New-York, November 18th, 1819.*

SIR,—In my former letter on the Tuckahoe I gave you the Natural History of that substance.—I now proceed, as I promised, to its Analysis.

Our chemical knowledge of vegetables has, till within a few years, been extremely limited. The older chemists were contented with the results they obtained by what is called *destructive distillation*. The products of this process were almost constantly the same. Of gases produced they were entirely ignorant ; nor had they any apparatus for detaining and examining them.

Neumann was one of the first chemists who used men-

strua. He subjected a great number of vegetables to analysis in his imperfect way; his principal object having been to ascertain the quantity of soluble matter they afforded to water and to alcohol. Rouelle, Hermstadt, and Scheele, have successively laboured in this department of chemistry, and have added considerably to our knowledge; and though Vauquelin, Fourcroy, Proust, Hatchett, Davy, and many others, have discovered so much; yet it will be some time before the chemical analysis of vegetables will be on an equality with that of minerals.

I make these preliminary remarks, that you may be prepared for the imperfect analysis which I now offer.

I had for a long time been anxious to ascertain the real nature of the fungus I have called *Sclerotium Giganteum*, but want of leisure, or the subject to operate on, had hitherto prevented me. Having by your generosity been put in possession of a sufficient quantity of the substance, I lost no time in subjecting it to chemical analysis. I was particularly desirous to determine whether the opinion of Dr. Macbride, that it was a modification of *gluten*, was well founded.

I. The first experiment I made on the Tuckahoe was to try the effect of boiling water upon it *in mass*. Pieces of the size of a walnut swelled a little, but did not soften much, in three hours boiling. They were then shaved very fine, and boiled again for seven hours: the substance swelled more, and became translucent, but did not break down into a pulp, nor did the shavings adhere together. The same was set aside to cool, covered with water, and kept in a temperature varying from  $45^{\circ}$  to  $70^{\circ}$ . In a week it became covered with *mucor mucedo*, (mould,) but at the end of seven weeks, no fermentation had taken place, nor had the mass become sour.

II. Some of the substance was reduced to a fine flour, and kneaded with leaven. The mass had not the least ductility, and though kept near a stove six weeks, showed no signs of fermentation.

These experiments are sufficient to prove that it cannot be gluten, for that substance, besides its other remarkable properties, putrefies very soon, when kept moist.

III. A portion of powdered Sclerotium was triturated in a mortar with cold water. The powder did not adhere, but it swelled a little. When the liquor was filtered off, it had a slight opaline appearance. It was then reduced to a small quantity by evaporation, and applied to slips of paper like paste, but without making them adhere.

IV. Some of the powder (120 grains) with a sufficient quantity of water, was introduced into a retort, and a receiver attached. When half the quantity of water was distilled over, it was removed for examination. It was colourless and nearly transparent, and had a peculiar, but not strong smell, a little resembling mushrooms. Various reagents applied to it detected no foreign substance; therefore little of consequence came over in distillation.

V. The liquor remaining in the retort was filtered *while yet hot*, that any gluten or starch it contained might not be deposited; as these substances are insoluble in cold water: but the fluid, when cold, let fall very little sediment.

- a. Alcohol poured into it did not affect its transparency, except when much concentrated; it then threw down a small quantity of a tough substance.
- b. Acids produced no effect.
- c. Vegetable blues were not altered.
- d. Solution of alum, or nitrate of silver, produced no effect.
- f. Neither did the acetate of lead.
- h. It could not be used as paste.

When evaporated to dryness, it left (2 grains) of a sweet brownish substance, which refused to crystallize, and burned with the caromel smell.

VI. The next menstruum used, was alcohol. It was digested a few hours on the sclerotium, and strained while hot, through blotting paper: what passed through was colourless and transparent. When much concentrated by

evaporation, it assumed the appearance of a jelly: this, when entirely dried, was of a horn-like texture, though brittle; and it was soluble in alcohol, but not in water. It weighed 1 1-2 grains.

VII. Ether was digested on some of the powder a considerable time, but it produced but little effect.

Finding that neither hot nor cold water, alcohol, nor ether, exerted much action on the Sclerotium, I tried the effect of alkalies.

VIII. A weak solution of potassa softened the powder, and when heated, effected a complete solution, of a brown colour, and the consistence of sirup. To this solution the following re-agents were applied:

- a. Muriatic acid instantly converted it into a colourless jelly, even when dilated with six times its weight of water.
- b. All the mineral and vegetable acids produced a similar effect.
- c. Likewise a solution of alum.
- d. Infusion of gallnuts produced a thick brown jelly.
- e. Muriate, oxalate, and nitrate of ammonia being added to the alkaline solution, formed the jelly, but they were decomposed. The liberated ammonia was manifested by the smell and by the cloud which formed when mur: acid was brought near it.
- f. Nitrate of silver, the acetates of zinc and lead, neutral carb: potash, sulphate of potash, and several other salts, gelatinized it.
- g. Muriate of soda did not produce the effect till the next day.
- h. Alcohol instantly separated an elastic fibrous substance, which collected on the spatula, and much resembled the *fibrin* of blood. It became semi-transparent and brittle on drying, and then was resolvable in alkali.
- i. Carbonic acid gas, passed through it, produced a jelly.



*k.* Also a current of chlorine.

IX. Caustic soda dissolved Sclerotium, and the solution was affected by tests, much like that of potassa.

X. Ammonia dissolves Sclerotium, but not so readily as the fixed alkalies, and the solution is colourless. When heated, the ammonia is disengaged, and the substance is left behind, unaltered in its chemical properties. In this way it may be spread over any surface by means of a brush. It will cause papers to adhere when applied as paste.

XI. The effects of acids on the substance of the Sclerotium were not less remarkable than those of alkalies.

When some of it in powder is thrown into warm nitric acid, a violent action soon takes place; much nitrous gas is liberated, and the powder is entirely dissolved. When the whole is boiled for some hours,—the acid being supplied as fast as it evaporates, crystals form in the solution, when set at rest. These are crystals of oxalic acid, as is proved by the abundant and instantaneous precipitate which falls when calcareous salts are added. A portion of the *artificial bitter* principle is also formed.

XII. The sulphuric acid when concentrated, decomposes the Sclerotium, and some of the *artificial Tannin* of Hatchett is formed.

XIII. The same acid, when diluted, dissolves it by the application of heat, without decomposition, and the solution is of a yellow colour. When this acid solution was saturated with an alkali, the substance of the Sclerotium fell down, but considerably altered in many of its properties. Red sulphate of iron did not discolour it, showing that no tannin was formed.

XIV. The muriatic acid dissolved but a small quantity of Sclerotium.

XV. Some of the substance in fine powder was kept suspended in water by agitation, while a current of chlorine gas was passed through it; but this agent had little more effect than making it very white.

XIV. It now remained to examine the substance by de-

structive distillation. A quantity of it in large fragments was introduced into a green glass retort, previously coated with clay. The vessel was exposed to a naked fire, which was gradually increased. A quantity of pure water first came over, then a thick yellowish smoke, which gradually condensed into an amber-coloured liquid. Much gas was also evolved, which was collected by the pneumatic apparatus. When examined, it was found to be carbonic acid, carbonic oxide, and carburetted hydrogen. The liquid in the receiver had a penetrating empyreumatic odour, a disagreeable acid taste, and it effervesced with alkaline carbonates. Some of it, saturated with potassa, did not give out any smell of ammonia, and when treated with sulphuric acid, evolved vapours of acetic acid. It appears, therefore, that the distilled liquor is vinegar, combined with empyreumatic oil, or what was formerly called *pyroligneous acid*.

The charcoal in the retort was small in quantity, and appeared as if it had undergone fusion, the fragments having all united into one mass. This charcoal incinerated in a platina crucible, yielded ashes which contained no alkali, but effervesced with acids, and appeared to consist in great part of carbonate of lime.

From the foregoing experiments it will be seen, that the Tuckahoe or Sclerotium is a remarkable substance, and very different from what it has heretofore been considered. It is abundantly proved not to be *gluten*—a modification of which substance Dr. Macbride supposed was its principal ingredient; others believed it to contain a large quantity of *starch*—but my experiments detected none. It certainly consists almost entirely of *one substance*, or that which is left when alcohol and water have taken up all they are capable of dissolving. In the latest works on vegetable chemistry, there are described about 31 species of secondary vegetable principles; though Davy supposes some of them are only modifications of others. Dr. Thompson has divided them into four classes, and the principle of

Sclerotium is excluded by its characters from the three first. The fourth contains all those ingredients of plants which are insoluble in water, alcohol or ether, and have a fibrous or woody texture. To this class the substance under examination belongs. With *cotton*, *suber*, or *medullin*, it cannot be confounded; but to the two remaining, viz. *Fungin* and *Lignin*, it has some affinity. *Fungin* is that which constitutes the fleshy part of most of the softer mushrooms, and was first described by Braconnot. It is a nutritious article, but may be obtained from the most poisonous species of *fungi*. It is insoluble in water, alcohol, and weak alkaline leys. The latter property distinguishes it sufficiently from the principle of *Sclerotium*. But it also differs from it in not being acted on by weak sulphuric acid; by its yielding prussic acid, and a fatty material, when treated with nitric acid; by its putrefying when kept under water, and particularly in yielding much ammonia when distilled. The *fungin* used in my experiments was obtained from the young *Lycoperdon bovista*.

From *Lignin* or woody fibre, the principle of *Sclerotium* seems quite distinct, as I have made comparative experiments with both substances to a considerable extent. *Lignin* does not appear to have been examined with sufficient attention; and the properties of this substance enumerated in the books, were very different from what I found them. It is said that woody fibre is soluble in pure alkalies; but I kept some of it boiling in a solution of potash many hours, without undergoing much change. It is also said to be soluble in nitric acid: I could only effect an imperfect solution by digesting it 24 hours. A very different effect, it will be recollected, was produced on the *Sclerotium*. Wood is of a fibrous texture, burns without frothing or melting, and leaves a charcoal of the original form of the mass; but these characters, and many others belonging to *Lignin*, are wanting in the substance examined.

Having shown that this principle differs from all those described, it must be considered as a new species, and may

be called SCLEROTIN. Its properties have been sufficiently detailed in the course of the experiments. It may seem a little surprising that a new vegetable principle should hitherto have been entirely overlooked; but when we consider that only about 30 species of Fungi have as yet been carefully analyzed, of many hundred known: that in most of these, some remarkable substances, such as adipocire, have been detected: we may expect, when more of this neglected tribe of plants are examined, several principles, now unknown, will then be brought to light.

With sentiments of the greatest respect,

I remain, Sir,

Your obedient servant,

JOHN TORREY.

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*Reflections and Observations on Entero-Mesenteritis, a disease of Children, commonly called Tabes Mesenterica, by H. M. J. DESRUELLES, M. D.*

*Translated for the Medical Repository from the Journal Universel des Sciences Medicales.*

EVERY disease which terminates gradually by disorganizing one or more of the internal viscera, arises from inflammation. If the disease be properly treated from its commencement, this lesion of the vital tissue is sooner or later arrested; but left to the influence of that combination of forces and actions usually denominated by the vague appellation of the *vis naturæ*, the inflammation runs through its stages, sometimes terminating by resolution, but more frequently producing morbid alteration in the organ, which finally proves fatal. These reflections are especially applicable to Entero-Mesenteritis, commonly called Tabes Mesenterica, on which I propose to make a few practical and theoretical remarks.

The improper regimen to which young children are sub-



jected, appears to me to be the principal cause of the disease. If we examine the treatises on this subject which authors have left us, we shall be convinced, that it has been caused by feeding them too abundantly on nutritious and stimulating food; that a protracted and obstinate diarrhœa has almost always preceded it; and that the examinations after death have shown considerable morbid alteration of the alimentary canal.

Irritation of the mucous membrane of the intestines, in children endowed with great irritability of the lymphatic system, constitutes what may be called the first stage of *Tabes Mesenterica*. We should be very careful how we permit the diarrhœa to continue in this disease, from an opinion that it is favourable to dentition; for it is not true that its protracted condition aids that process: neither must it, on the other hand, be checked by astringents and corroborants, for very far from being induced by debility, it is caused by an irritation which will be best allayed by means of a mild and muciluginous diet.

As soon as the irritation of the mucous membrane of the intestines becomes chronic, it is propagated by continuous sympathy to the absorbents and lacteals, and thence to the mesenteric glands, which become red and enlarged. If the irritation be moderate, these glands will remain stationary for years; but if the disease be further aggravated by heating medicines and stimulating diet, they will then rapidly increase, and soon become tuberculous. At this period they will be found to resemble encrysted tumours, and to contain a thick granulated matter, of a yellow or whitish colour. The absorbent vessels continue for a long time to perform their functions imperfectly, so that the child becomes more and more emaciated, and the abdomen more tumid, till at length the glands being totally disorganized, absorption ceases, lientery supervenes, and the child dies tabid.

The numerous observations which I have made from examinations of adult persons who have died of chronic enteritis, have suggested to me these ideas on the nature of *Tabes*

**Mesenterica.** In those cases where the lymphatic temperament was strongly marked, I have seen the mesenteric glands in the condition I have just described, forming enormous masses, containing a melicerous substance ; and these tumours I found to correspond exactly with those parts of the alimentary canal that were most diseased. In those subjects on the contrary, that were less disposed to lymphatic irritations, the mesenteric glands were merely swelled, and of a dark red colour. Whenever astringent and tonic medicines are employed in these cases, they aggravate the disease, and convert the chronic inflammation into one of an acute character, which constitutes the disease improperly called Entero-Mesenteric fever, about which we have lately had so much written ; which can serve no other purpose than to mislead us on the nature of the disease and the remedies to be employed for its removal.

Perhaps it may be objected to me, that the adult subjects in whom these two conditions of the mesenteric viscera were observed, had the abdomen only slightly tumid ; whereas the swelling and hardness of this part are the principal characteristic symptoms of the *Tabes Mesenterica* of children. But in order to obviate this objection, it is only necessary to call to mind the relative state of the abdominal viscera in adults and children. Perhaps it may also be objected that the swelling of the mesenteric glands is idiopathic in certain cases—as, for example, in scrophulous subjects. I have already remarked with what facility lymphatic disorganizations occur in individuals of that predisposition, so that even a slight irritation, but for a short time applied, will often be sufficient to produce them. If any one will show me a single case of *Tabes Mesenterica* that is not in its first stage attended with diarrhœa, or some other alteration of the alimentary canal, as well as the tumid state of the abdomen, I will allow the objection to be well founded ; but, until then, I shall persist in believing the primitive seat of the disease to be in the mucous membrane of the intestinal canal.

*Tabes Mesenterica* is not an idiopathic disease, but the termination of a chronic enteritis. It is very seldom that it is cured after the mesenteric glands have become greatly enlarged and schirrous; and hence the necessity of directing all our care to combating the inflammatory symptoms in the early stage, that we may hinder its further progress. Heretofore practitioners have never thought of treating this disease until the swelling of the abdomen had made considerable progress; and of course all the preceding symptoms have been wholly unknown and neglected: and, indeed, we are chiefly indebted to the author of the work on *Chronic Inflammations* (M. Broussais) for our knowledge of the symptoms of this class of diseases; for before the appearance of his book, no one knew how to appreciate justly their symptoms.

In the advanced stage of this affection, the pathologist should not confine his attention to the mucous membrane of the intestinal canal; the other organs of the digestive system do probably also exert a great influence over the disease. Is not the circulation in the *vena portarum* retarded by the swelled and tuberculous state of the mesenteric glands? May we not suppose that the two principal viscera, the liver and spleen, which serve as a kind of diverticula to the stomach, intestines, and epiploon, are also considerably enlarged, and contribute greatly to render the abdomen tumid in this disease? Furthermore, we know that the *vena portarum* receives its blood from the intestinal canal by numerous very small vessels. May not these vessels absorb from the canal some of the morbid matter that is there formed, and transmit it to the liver, and thence to the other organs of the system and impair their tone and vigour?

These ideas on the enlargement of the liver and spleen, and the absorption of morbid matters by the hepatic vessels, might seem to warrant the employment of evacuant remedies. Nevertheless I do not believe them suitable to the treatment of *Entero-Mesenteritis*; because purgatives

must necessarily augment the inflammation; and every thing stimulating must hasten on the morbid alterations that are already taking place.

### CASE I.

A child, aged six and a half years, born of healthy parents, nursed by the mother, living in a salubrious country, and enjoying all the conveniences of life, was attacked towards the end of the year 1815 with symptoms which the attending physician judged to indicate a scrophulous disease. The extremities were greatly emaciated; the skin pale, and covered here and there with red patches; the face suffused; the eyes piercing, fixed and heavy, and the temper peevish and fretful. The antiscorbutic sirup, the vinous tincture of Peruvian bark, bitters, and generous wine, were administered, and the child fed on the most nutritious aliment, without producing any alleviation of the disease.

*September 1st, 1817.*—Mr. Dupont, a practitioner of Lille, was requested to see the child. He found her very much emaciated; the skin pale, with the trunk and face swelled, and disfigured with red stripes; the eyes animated and piercing; the pulse irregular, intermitting, vibrating and slow; the tongue in the centre covered with a white fur, its sides of a pale red, and the papillæ of a brighter red than the other parts. The epigastric and hypogastric regions were very painful and sore, and hot to the touch. The child was subject to colic pains on taking the lightest food; the abdomen was tumid and hard; the alvine discharges were frequent, fluid and light-coloured; the urine deposited a lateritious sediment; all the other functions were natural. M. Dupont prescribed a mild diluent farinaceous diet, with barley water for ordinary drink, &c.; forbid the use of sirups, medicated wines, and every kind of animal food. His advice was strictly pursued, and an alleviation of the symptoms soon followed.



Happening to be at Lille about this time, (October 8th, 1817,) I was called in to see the child in consultation. It appeared to me to be a case of chronic Entero-Mesenteritis, and I advised the adoption of a severe antiphlogistic regimen. Accordingly we allowed for diet barley with milk diluted and sweetened, barley-water for ordinary drink, and a demulcent and anodyne at night. Eight leeches were also applied to the hypogastrium, and the punctures allowed to bleed for five or six hours; after which an emollient cataplasm was applied over the parts. The day after the use of the leeches, the diarrhœa entirely ceased; the stools became natural, and no colic pains remained. The cataplasm and other means were continued.

Three days after the application of the leeches, a pustular eruption appeared on the abdomen, which went through its periods without the aid of medicine. Constipation had now succeeded the diarrhœa, which was obviated by the mildest laxatives, as the juice of ripened fruits, &c. The size of the abdomen soon gradually diminished.

*November 5th.*—The child has recovered surprisingly, and is becoming fleshy and ruddy. The plan prescribed has been strictly pursued, except that a light chocolate has been allowed for breakfast.

## CASE II.

The daughter of Col. B——, aged 16 months, of a feeble and scrophulous habit, has been afflicted for eight months with a diarrhœa, which has resisted every means that could be devised for its relief. She was extremely emaciated, with the features so pinched and contracted, that her face bore the marks of premature old age. The skin was soft, flabby, and, as it were, detached from the subjacent parts, wax-coloured, and covered with whitish scales. She ate voraciously, cried almost continually, and drank excessive-

ly, especially at night, during which she would sometimes take as much as two quarts of wine and water, and sweetened water. Her abdomen was hard, very much swelled, and presented a singular contrast to the rest of her frame. The linea alba, in its whole length, was as much as two fingers breadth wide, with the umbilicus greatly dilated and projecting, especially when the child cried, which occurred on the slightest provocation. She had five or six alvine evacuations daily, of watery consistence, sometimes light-coloured and granulated, at others greenish and glareous. Since her eighth month, she had been chiefly fed on the best viands, with gravies and the richest soups. Her drink had habitually been claret. She was thinly clothed. Before contracting the diarrhœa, her health had been very good, and four incisor teeth had appeared.

When I first saw her, which was on the fifteenth December, 1818, she was attended by a physician who was treating her with stimulating bitter sirups, resolvents, and the most nutritious animal food. I merely informed the mother that the child was threatened with *Tabes Mesenterica*, and recommended flannel clothing; but my advice was not well received, nor attended to.

*December 15th.*—The attending physician being absent, and the child having some cough and fever, I was requested to visit her. I immediately diminished the allowance of food to one-fourth; gave diluent drinks and a pectoral decoction. The cough and fever subsided in two days, and I discontinued my visits. On the 27th of the same month, I was again called, and requested to take the patient wholly under my charge. I found the abdomen swelled, hard, and tender to the touch; its contents made the hypochondriac regions very prominent, and rendered the respiration frequent, and obstructed with slight cough. The skin was very hot, dry, and of a dirty hue; the pulse frequent and unequal; the tongue red on its border, and in the centre covered with a white paste, with the base of the papillæ

red;\* the face was sometimes pale, at other times suffused, and indicated great internal suffering; the alvine evacuations were five or six daily; the urine high coloured, and deposited a lateritious sediment.

From all these symptoms, I had no doubt as to the nature and seat of the disease, and resolved to combat it,—not by resolvent and bitter purgatives, but by an antiphlogistic regimen, and the employment of those means which the violence of the irritation and the general condition of the patient appeared to demand. In this way I hoped to calm the irritation of the mucous membrane of the intestinal canal, and reduce the swelling of the mesenteric glands, which I judged not to be as yet schirrous, or I should have looked upon the case as hopeless.

I was the more encouraged in adopting the antiphlogistic plan of treatment, as I found that stimulants had heretofore aggravated all the symptoms. I diminished gradually the quantity of soup which the child had been in the habit of taking, and substituted a sweetened mucilaginous decoction. The diarrhœa soon diminished, and the pulse became calmer; but the abdomen remained stationary, and I directed it to be rubbed twice daily with oil of chamomile flowers, and the whole body washed with warm aromatic vinegar, with the view of re-establishing the cuticular function; but without avail. I afterwards changed the animal soup for a vegetable decoction, to which a small quantity of butter was added. During the month of January the child's health improved; but as soon as the regimen I prescribed was abandoned, and animal food, and other more substantial diet permitted, the diarrhœa returned with as much violence as formerly; the abdomen became harder and more tumid,

\* This appearance shows irritation of the mucous membrane of the intestines with excessive secretion. It often occurs in children labouring under diarrhœa, or when the intestinal canal is overloaded with indigestible substances. When this symptom occurs without fever, a purgative is indicated; but if there be fever with redness of the end of the tongue, diluent drinks answer a better purpose.

and the skin hotter, with increased thirst and disturbed sleep. Many times during the day the face became alternately pale and suffused; and in every respect the child was thrown back into its former condition.

The sensible but slow alleviation which resulted from the antiphlogistic regimen, convinced me that it alone was not sufficient to overcome the disease. In suppressing the excitants, I diminished, it is true, the irritability; but in allaying the local irritation, I increased the general debility, and rendered the patient more sensible to the action of phlogistic agents. On the other hand, I feared that the least deviation from the antiphlogistic course would add acute inflammation to the existing chronic irritation, and by accelerating the morbid alterations then going on, further debilitate the patient.

*February 1st, 1819.*—The child, after labouring for some time under the diarrhœa, became much worse. The abdomen became enormously enlarged, with insupportable heat; the pulse frequent, hard, quick, and intermitting; the face, feet, and legs œdematous.

*February 2d.*—All the symptoms were seriously aggravated. The frequency, hardness, and quickness of the pulse, as well as the heat of the abdomen, induced me to apply four leeches around the umbilicus. This local bleeding produced the best effects, by diminishing the fever and excessive heat. A farinacious decoction was the only diet allowed, which agreed very well, and had the advantage by its small volume of nourishing the child, without much distending the alimentary canal. Under this treatment the abdomen soon lessened, and became less tense, and the stools of a better consistence. I was then induced to allow of a little soup, which I found to disagree, by augmenting the alvine evacuations, and I determined in future to trust to the decoction alone. The child, after a time, refused this decoction, and I substituted a preparation of Persian salep,\* to which I added some ordinary soup; but this last

\* This last is very similar to the Tapioca.



evidently injured her, and I was obliged to confine her to the salep alone.

During this month she was much better; her strength was returning, she was playful, slept well, the size of the abdomen diminished, and every appearance promised a recovery from the present treatment; but on the first of March some animal soup with bread, was given her, and repeated three days successively, when it brought back the diarrhoea, the heat, and the fever; the abdomen became tumid and tense; the face, feet, and hands œdematous; the strength greatly exhausted; the pulse very frequent, small, unequal, and intermitting, and the mildest drinks passed through the alimentary canal unaltered. I then prescribed the lightest diet; a mucilaginous decoction for drink; an emollient enema, and a stimulant semicupium. On the succeeding days there were many febrile exacerbations attended with faintings, which were relieved by the stimulant semicupim. I afterwards applied sinapisms to the feet and legs, and blisters behind the ears. The pulse soon became regular, and the faintings did not recur; but the child moaned incessantly, and the lientery continued unabated. On the morning of the 8th the faintings recurred, but were somewhat relieved by dressing the blisters: the pulse was so frequent that it could not be counted. I advised the application of leeches to the anus; but the parents desired a consultation, and Dr. Broussais met me, and agreed with me on the propriety of their use. Four were accordingly applied around the anus, and the punctures suffered to bleed for an hour. The mucilaginous drink and the cataplasm to the abdomen were continued. A sirup composed of the sirup of catechu and lettuce water was also administered; but as it passed through the bowels unaltered, the sirup of quince was substituted, and with the best effect.

The child continued doing very well until about eleven o'clock on the 9th, when a severe exacerbation came on. The face became pale and cold; the abdomen very hot,

with continual borborygmi; thirst excessive; tongue red and dry; lips purple, and the eyes glassy. Two leeches were applied near the anus, which soon procured relief. The diarrhœa was much abated, and a tranquil sleep, which soon came on, greatly reduced the frequency of the pulse.

An exacerbation like to the preceding occurred on the 11th, and two leeches applied to the right illiac region soon calmed the symptoms. The diarrhœa had now ceased; the thirst was very moderate, and the blistered parts afforded an abundant suppuration. The child took frequently of the decoction, in which gum arabic was now substituted for the hartshorn shavings. She continued to have five or six stools daily, and at night febrile exacerbations. The stools were liquid, of a yellowish green and purulent, containing a great quantity of hardened round lumps, of the size of a hazel-nut, which when dried were of a horny texture. On the 16th and 17th the thirst was increased; the pulse became more frequent and quick; the alvine discharges purulent, bloody, and containing some of those scybalæ before spoken of. Bread tea, barley, and gum arabic dissolved in water, were substituted for the Persian salep.

*February 18th.*—The child appeared better. The abdomen was softer, and covered with an eruption resembling flea-bites, and also the internal and upper parts of the thighs. A flannel wet in a decoction of Peruvian bark was applied over the abdomen in place of the cataplasm; and those to the feet and legs were directed to be made of flaxseed and broth.

*February 19th.*—This morning the pulse was very frequent, small and unequal; thirst considerable; tongue red and dry; abdomen tympanitic, and the excretions suppressed. By the advice of Dr. Broussais, the decoction of bark was discontinued, and the cataplasm re-applied. The child was allowed to drink cold water, and every now and then of sweetened water.

*February 21st.*—The patient was much better, and the

pulse not so frequent. After putting her into a bath of soup, a flannel dipped into an acidulous decoction of Peruvian bark was again applied to the abdomen.

*February 23d.*—Dr. Auvity saw the child in consultation, and advised goat's milk, which she drank with avidity. The next day a few grains of prepared chalk was given before taking the milk. When the Doctor advised the goat's milk, I expressed my fears that it was passing too suddenly from a very low diet to one entirely animal, and proposed to dilute it with two-thirds of some mucilaginous decoction; but he thought otherwise, and I yielded to his experience, and the great desire of the parents to make trial of this remedy. The fomentations and cataplasms were continued. At 4 o'clock P. M. the child was attacked with colic pains, and I was induced to discontinue the chalk, and dilute the milk. She suffered extremely during the whole night; the countenance expressing great agony; sometimes she lay with her knees touching the chin, and at other times she was tossing about in the most frightful convulsions, until at length she became exhausted, and fell asleep towards morning. On waking, she drank with avidity of some barley-water, and appeared to be considerably relieved by oily frictions to the abdomen, and a semicupium. The diluted goat's milk, notwithstanding what had happened, was continued. The alarming symptoms of last night came on again in the afternoon; her eyes became haggard and wild; she threatened to bite any one that approached her, and screamed terribly; at one time refusing every thing, and then again eagerly calling for drink, which, when offered, she would refuse. At length I gave her iced water, and small pieces of ice, which she took greedily, and in large quantities, during the night. By this means I finally succeeded in allaying the pain and anguish, and she obtained some sleep.

The next morning (the 27th) she lay very tranquil, only complaining now and then of colic pains. The iced water was continued during the day. The emaciation and debility

were extreme; the swelling of the face had disappeared, and she was now a perfect skeleton, merely covered with skin. The abdomen and thighs were covered with bluish spots; the pulse was feeble, but regular without frequency. I put her into a bath made of soup and red wine, and allowed her a mucilaginous drink. The cataplasms and fomentation were continued. In the evening two incisor teeth made their appearance.

*April 1st.*—The child continues to do well. Other teeth have appeared, and the abdomen is recovering its natural size.

*April 2d.*—The cataplasms and fomentation were discontinued, and frictions on the abdomen of camphorated oil of chamomile substituted. During the whole of April, her nourishment consisted of goat's milk, with now and then a little soup and bread.

On the 1st of May she was taken into the country, where, strictly confined to the diet prescribed her, she soon recovered her strength and flesh.

In the month of July she was attacked with hooping-cough, for which Messrs. Auvity, Racamier, Dupuytren and myself advised baths of the sulphate of soda, and a blister to the arm. She gradually returned to a more nutritious diet, and at this time she is in perfect health. The linea alba and umbilicus have returned to their natural state, and she shows no marks of her former disease.

It may be observed, in corroboration of the nature of the above case, that this child's oldest brother died of *Tabes Mesenterica*, treated after the common method; and a younger brother, of acute cerebral fever, that lasted only forty-eight hours: and on opening the body after death, the mesenteric glands were found greatly enlarged. These three children were of the same temperament.

From the foregoing reflections and cases I would deduce the following results:

- 1st. That *Tabes Mesenterica* is a chronic *Phlegmasia*, and should be classed as such.



- 2d. That its seat is in the mucous membrane of the intestinal canal.
- 3d. That the irritation is propagated by continuous sympathy to the corresponding mesenteric glands.
- 4th. That accordingly, the disease should be designated by the appellation Entero-Mesenteric, which indicates the nature and seat of the disease.
- 5th. That the diarrhœa of children does not depend on debility, but the irritated condition of the mucous membrane of the intestinal canal.
- 6th. That after it has continued some little time (even in cases of teething) it is to be treated by anodynes, and a mild, mucilaginous diet.
- 7th. That an opposite treatment has more frequently produced *Tabes Mesenterica* than has heretofore been imagined.
- 8th. That Entero-Mesenteritis is the same in adults as in children, only that the former are not nearly so susceptible to this kind of morbid alteration.
- 9th. That Entero-Mesenteritis is only a termination of chronic Enteritis, and may often, in the first instance, be prevented by proper treatment.
- 10th. That even after the disease has made considerable progress, it should be treated by antiphlogistic remedies, in preference to purgatives, bitters, pretended resolvents of the lymph, &c. which all evidently tend to aggravate the inflammation, and render the disease more difficult of cure.
- 11th. That, finally, in the advanced stage of this disease, we ought to pay attention to the other parts of the digestive system, and the vena portarum, which are then no doubt involved in the disease, and exert a great influence over it.

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## REVIEW.

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IRVINE'S TREATISE *on the YELLOW FEVER*—pp. 57, 8vo.  
*Charleston, S. C.*

BEFORE we attend to the merits or faults of this work, we beg leave to make some remarks on its lucky escape from everlasting oblivion. It was first, as we are informed by the author, offered to the public in a *Southern gazette*, where but a few intelligent readers could have noticed its detached essays. At their solicitation he was afterwards induced to embody it in a treatise; to give it a permanent and more correct form: and such, indeed, as we think deserves our present analysis. At the same time, we take this opportunity to account for the fact, that very few works of merit on the subject of yellow fever have as yet been produced in this country; and much fewer than in Europe, where almost every nation and celebrated school have largely contributed to the general stock of knowledge and useful inquiry on this important subject: although this pestilential epidemic has seldom scourged their population, and that only in the south of Spain and Italy. Waiving, therefore, an invidious comparison between the authors and works of one country and those of another, which, if not imposing by their intrinsic merit, would at least be so by their number, we observe that a great part of our intellectual treasures on various subjects are daily thrown into the newspapers, just as into a general grave. Their ephemeral existence seldom deters writers from making use of those cheap and convenient vehicles for their most valuable communications; especially when they are adapted to existing events: are subjects for the contention of parties, or calculated for the display of controversial arguments. Public alarm, or various causes of general interest,

as well as private views, and the respective pretensions of editors of newspapers, who never fail to assume some public task of *watchmen* or *sentinels*, *scientific instructors*, *moralists*, *politicians*, and what not, are the incessant operating motives that enlist writers in those columns. Essayists thus give away the materials for thousands of interesting volumes, which will seldom be resuscitated from the masses of that waste paper their rapid renewal necessarily dooms to immediate destruction; and so it has been nearly thirty years; especially on the numerous questions connected with the subject we are now to consider.

But let us come to Dr. Irvine's Treatise, which is now safely kept in our libraries, for present and future instruction. Firmly believing that the yellow fever is of domestic origin, whenever there is a concurrence of local and atmospheric causes, he professes to be perfectly acquainted with the proofs which have been so often adduced, of its spontaneous formation in tropical regions, as well as on board of ships, and in the maritime parts of our country, during warm seasons. He therefore confines himself to two arguments, drawn from facts observed in that part of the continent in which he resides. These are powerful and conclusive; and they moreover do away the difficulty of conciliating the prevalence of yellow fever, during seasons of different character, (dry or wet,) with the occasional preservation of large populations, where many domestic causes seem to be concentrated.

The first argument is simply this: That at every period, in which the yellow fever has prevailed in Charleston, the whole summer season has been an unusual period of sickness in the country throughout the state, where fevers of different, but dangerous, character, have often caused great mortality. This fact has been so well explained and illustrated by various respectable writers in Carolina, that it has now become a philosophical rationale to infer, that a general morbid constitution of the atmosphere is eventually necessary in this, as well as in any other epidemic preva-

lence, and that the same being aggravated by the local exhalations of populous cities, is rendered sufficiently active for the formation of a pestilential or malignant disease. Hence another remarkable circumstance, which has seldom escaped the attention of practitioners in any city, visited by plague or yellow fever; demonstrating that different degrees of morbid intensity, in the surrounding exhalations, according to localities, will form a variety of degrees in the prevailing disease, showing the lightest, as well as the most deadly and rapidly fatal attacks. From the simultaneous existence of different epidemics in the country and city, it follows that the latter has been generated under the general agency of the atmosphere and local causes, without the intervention of foreign ships, or infected packages and persons.

Another argument is taken from the similar nature of the atmospheric constitution of the country and of the city. Although the last may sometimes be aggravated, either has the same influence on the natives, and imparts to them that kind of preventive idiosyncrasy which protects them against yellow fever; and assimilates them, in that respect, to those of the tropical regions, who are known to be unsuceptible of the same; while the inhabitants of the more northern parts of America, and Europeans, who come to any part of the tropics, or warm latitudes, are the readiest victims of any kind of pestilential or malignant disease. Thus the idiosyncrasy of the first, and the alarming susceptibility of the last, are phenomena, or mysteries quite inexplicable upon the doctrine of importation or contagion: for we are not taught, nor justified in believing, that it has been, or could ever be, the privilege of any nation, or of all the inhabitants of one, or many sections of the world, to be naturally protected against diseases declared to be contagious. Such general exceptions have, however, so often taken place in Charleston, that its magistrates are known to have ordered foreigners, for their safety, to quit the city, where the natives have remained perfectly safe and quiet.



This attribute is still more evidently proved by the immunity which foreigners can acquire in Charleston, by remaining in the place through one or more *yellow fever seasons*: they may afterwards expose themselves to it with impunity.

This law does not affect foreigners only; but the children of the natives are also subject to it till the age of 12 years, before which, their tender organization cannot receive a proper modification to resist infection. Certainly no stronger argument could be adduced to prove the favourable agency by which the organic susceptibility to the yellow fever may be destroyed by the very climate in which it is generated; especially when it is considered, that the city of Charleston, in which these observations were made, keeps up an uninterrupted intercourse with the West-India islands, where yellow fever is supposed to be an endemic.

We come next to other interesting subjects in the above Treatise, namely, the author's theory of the disease, and his treatment of the black vomit, which, in his introductory words, we confess "*are not yet satisfactorily established.*" He thinks that a state of *morbid secretion* from the arterial system constitutes yellow fever, its phenomena, and its symptoms. This diseased process is carried on in every part of the system, and forms the yellow depositions on the skin and eyes, while it creates great inflammatory action, and occasions serous effusions in the brain, &c.: therefore yellow fever is a *morbus vascularis*. It also extends its action to the liver, and especially to the stomach, causing a thickening of the coats of that viscus, and engorgement of its vessels, till ultimately black matter is formed, and oozes from its vascular tissue. During this unnatural and destructive action, the cerebral functions are disturbed; those of the skin, and many of the secretions, are transformed into profuse hemorrhage, principally from the fauces, nose, ears; and mouth, and also from the intestinal canal, which

series of malignant accidents accelerates its fatal termination.

It is to prevent the greater influx of this vitiated secretion in the stomach, which, under the name and character of black vomit, proves so fatal in the yellow fever, that Dr. Irvine recommends the *Saccharum Saturni*, or acetate of lead. He accounts for its efficacy in page 38, in the following words:—"It ties up and corrects those vitiated secretions which are constantly acting upon, and destroying the texture of the blood, thus directly invading the source of life, and giving rise to those violent affections of the stomach, brain, and other viscera, which are unhappily familiar to the unprofessional, as well as the practitioner. It gently excites the vital energies, and occasions a salutary diffusion of the nervous influence throughout the system." Besides his own authority for introducing this remedy, our author produces the assent of cotemporary eminent physicians. He also vindicates its curative properties in numerous diseases.

We will remark on this subject, that the usefulness of lead in medicine, when properly used, is no more to be doubted than its power of creating the *colica pictonum*, when freely administered; yet it appears, from Dr. Irvine's recommendation of its use in *the decline of fever*; and from his omitting specific illustrative cases in favour of the remedy, that we must not be too sanguine, or confident of success, for the following reasons. The theory here exhibited of a *morbis vascularis*, is no more, after all, than what is known and defined by ancient pathologists, as the decomposition of the blood, and the formation in pestilential diseases of putrid humours, which are thrown off in various ways and forms, but principally through the skin, stomach, and bowels. It should therefore be a general indication in malignant fevers, effectually to promote those gastric and alvine discharges of great quantities of bilious, poraceous, and putrid intestinal matters, which are incessantly secreted. Nor is the given caution of using the remedy in the *decline*

of fever, that is, at the remission of the first stage of the disease, sufficient to provide for them; as the most beneficial and critical evacuations of offensive bile, and intestinal mucus must take place at the termination of the paroxysms, or of the complaint itself. We are at a loss to comprehend how the *tying up of the inordinate and morbid secretion from the stomach* can be usefully procured by a remedy, which, at the same time, would check and absolutely put a stop to those alvine discharges, which are necessary in the successful treatment of all kinds of fever!

In another point of view, a preference of *Saccharum Saturni* to mercury is not successfully vindicated by the many alleged failures or misapplications of the latter in the yellow fever: We acknowledge, however, that Dr. Irvine has done justice to this subject, not only from his practical experience, but also by his general acquaintance with preceding writers; although he has omitted to notice some authority which might have been adduced on this question. If there is any merit and solidity of argument in the rejection of salivation as remedial in yellow fever, and much more in defining the *Modus Operandi* of mercury in any disease whatever; we really feel authorized to remonstrate against this South-Carolinian writer, who has overlooked a strong recommendation against salivation in yellow fever, in the *Medical Repository*, O. S. vol. iv. page 12, published twenty years ago, by the writer of this article; and also for not having noticed certain modes of defining the properties of mercury, as in vol. iv, *New Series*, page 32, by the same. With those previous hints or documents, we have no doubt that he would have been led to take a middle course, and have understood, that mercury may be considered (as it was by Rush) highly beneficial and useful in yellow fever: provided it was administered as a cathartic in the first stage of the disorder, and before the long train of symptoms, affecting principally the organs of digestion, could fatally determine its march. The remedy had never, indeed, been supposed a panacea, or an antidote, in yellow fever, had it not, by numerous facts, thus

reduced the disease to a more manageable form. But it will be said, also, that there are many mild, recoverable attacks of it, or that the more timely exhibition of the remedy acted as a prophylactic; be it as it may, we hold it certain, that, in many cases, its repetition has been warranted by a more composed state of the stomach. Hence it has also reanimated the functions of the liver, the secretion of hepatic and cystic bile, and promoted the resolution of the disease by critical evacuations.

The author before us is exceptionable when he maintains the formation of yellow fever in maritime situations, within *the influence of tide waters*. There is no sensible tide in the *Mediterranean* or the *Caspian Sea*. Whatever variety of plague or yellow fever may exist on the borders of the last, we cannot ascertain; but that country, as well as the shores of the *Mediterranean*, is the theatre of both: and on several points of the last, (namely, Carthagen, Alicant, Malaga, and Leghorn,) the yellow fever has raged within twelve years. Neither are tides felt on the Mississippi, as high as the port of Natchez, where the yellow fever has of late years made considerable ravages.

With little or no advantage; for consistency and for argument's sake, Dr. Irvine has represented the yellow fever as a disease *sui generis*: "for," says he, (page 22,) "it is a point gained to establish what a disease *is not*, as well as to ascertain its proper diagnostic." We therefore remark, that he not only wants proofs *a priori* of his doctrine, but that he has inverted the best argument that could be adduced of the contrary, which we will transcribe in his own words. (page 21.) "When the great body of the air is loaded with those deleterious exhalations which occasion bilious remittents, the superaddition of the various noxious emanations proceeding from an ill-cleansed city, necessarily engenders a malignant disease."—*Ergo*, we should conclude that yellow fever is but a high degree of the bilious autumnal fever: and this was the doctrine of Rush, the greatest writer on this disease, on this side of the Atlan-



tic, whatever may have been the opinion of the *greatest writers* on the other, and on whose authority Dr. Irvine relies. "But," he says, "the matter of black vomit is not bile; and that the symptoms differ from those of camp, jail and hospital fevers, which are produced by putrid emanations. All this may be true; and yet yellow fever differs from these diseases, because it is constituted by all those united characters, which may separately be the fatal prognostic of any kind of miasmatic fever. The discrimination, therefore, is not in the *genus*, but only in the *species*, and is absolutely no more than the purulent stage, or hemoptysis, when compared to tubercles, hectic fever, short breath, and dry cough, in pulmonary consumption." Again—"This dreadful epidemic does not resemble any of the fevers of a nervous or typhus type, inasmuch as it is never ushered in by any very decided chills, or rigours; has no remissions or intermissions, and never resolves itself by perspiration or profuse sweating; the system seeming quietly to collapse and succumb under the weight of the disease." (page 21.) This is eminently true in all fatal cases; but Dr. Irvine tells us, that there are *subgrades* of the disease, the majority of which, cases, eventuate favourably on the third day, by perspiration, &c. Here we see, that in cases of recovery, yellow fever re-enters the general class of diseases from which it does not differ, except by the greater intensity and fatality of its symptoms.

In parting from this work of an experienced practitioner, and estimating highly, as we do, the greater part of his views and remarks, we hope that the liberty we have taken to oppose some of his doctrinal points will neither diminish his merits, nor invalidate our recommendation of its perusal to the seekers of truth and useful knowledge on this important subject.

*Specimens of Systematic Misrule, or immense sums annually expended in upholding a single imposture ; Discoveries of the highest importance to all Mankind smothered ; and injustice perpetrated, for reasons of state ; from official proceedings and correspondence of the Ministers of the Crown, the Privy Council, the Board of Trade, the Levant Company, &c. &c. &c. and Reports of Committees of the House of Commons, and of the College of Physicians, during an Investigation protracted for a period of nearly four years : illustrative of the real remote cause of all the distresses of the nation, and of their sole efficient remedy—*by CHARLES MACLEAN, M. D. *London, 1820, in 8vo. pp. 220.*

OUR readers may justly wonder at such an extraordinary title, and, perhaps, notice its irrelevancy in a Medical Repository; for the work might seem, at first glance, to be one of the numerous shafts of the opposition party against the British ministry, and the various branches of their administration ; but it, in fact, discusses and elucidates, at its most important stage of controversy, a great medical question, viz. : the communicability of disease, and the necessity of quarantine regulations. It is also interesting to Americans to observe, that the doctrine of the non-existence of human contagion in malignant fevers, which their physicians long ago maintained against a host of learned men in Europe, has no doubt much aided and encouraged Dr. Maclean in his labourious and persevering endeavours to reform the expensive quarantine statute of the British empire, founded on the belief in the contagion of the Levantine plague ; which he terms a stupendous imposture. We think that it is full time that the science of medicine should be divested of the remaining errors of the middle ages, when it was neither dignified by the precepts of Hippocrates, nor enlightened by the doctrines of the Arabian physicians, and during which time the unphilosophical theories of contagion were taught and promulgated. But we regret to say, that it appears

from the official proceedings which the late conflict has elicited, that the Ministers of the crown, the Contagion Committee of Parliament, and the College of Physicians, are averse from the explosion of these errors; and that, too, on no better argument than the non-expediency of substituting a new doctrine for one which has prevailed for ages. Neither is the exposition of these learned and respectable bodies satisfactory for the purposes of police regulations, or consistent with the present state of medical philosophy, when they restrict the contagion of plague to contact alone; since we are yet to learn to what *sort* or *mode* of contact the contagious attribute is to be ascribed. The better to acquaint our readers with the subject under consideration, we beg leave to refer them to our analytical account, (vol. iv. pp. 151 and 372,) of Maclean's results of his investigation respecting epidemic and pestilential diseases. In treating of his voyages to Malta and Constantinople; of his attendance on pestiferous patients; of his historical sketch of contagion; his doctrinal remarks; and the manifold commercial, moral, and physical evils arising from all quarantine establishments, as at present conducted; we were equally impressed with the great importance of the subject, and respect for the labourious researches of the author; and at the same time, also, we offered our criticisms, we think with candour, on such points of doctrine as appeared to us to be imperfect or exceptionable.

As soon as his first volume on this subject was before the public, (in 1815,) the Doctor, fortified by the patronage of a Prince, a letter from the British Minister residing near the Porte, and a particular recommendation from the honourable the Governor, as well as the right worshipful the Company of Merchants of England trading in the Levantine seas, commenced his proceedings with the government by communicating to Lord Castlereagh his proposals for diminishing the mortality of pestilential diseases in the British possessions in those regions. His proposition was to organize a medical commission, and institute a hospital,

wherein the plague might be treated, and its causes investigated, at a small expense, (£5000 or £6000,) and thereby secure great advantages to the crown, to commerce, and to the cause of humanity, as we will hereafter explain. But here his disappointments commenced, and his attempts to meliorate the present system of quarantine, have been pursued through a thousand rebukes and tergiversations. It would be impossible for us to notice and relate every progressive cause of opposition in the various subordinate branches of the government, for a full account of which we refer the reader to the work itself. When we consider the great facilities and ample provision which the British government are in the habit of extending for the advancement of general improvement, we are not a little surprised that they should, in this instance, and as it appears to us, without sufficient cause, reject or neglect the experience and valuable services of one of their own subjects, who had done, at the imminent hazard of his life, much more than any other European philosopher or physician had ever thought expedient to attempt.

The following are the principal charges brought by the author against the ministry :

“Evinced a *prima facie* hostility to discovery, by refusing to adopt a plan supported upon adequate grounds, for prosecuting researches concerning the plague, and diminishing mortality in the Ionian Islands and parts adjacent.

“Contriving by trick, procrastination, evasion, and subterfuge, to defeat, as far as in them lay, the objects of an inquiry of the highest importance to all mankind, now, for the first time in the history of the world, formally attempted.

“Persevering not only without evidence, but in defiance of irrefragable proof, to maintain an imposture and delusion, disgraceful alike to humanity, science, and civilization, and deeply affecting health, life, revenue, commerce, and navigation, individual freedom, and the intercourse of nations.

“Concurring, whilst my proofs were before them, and



notwithstanding my urgent remonstrances to push *sub silentio* through Parliament, a law with respect to Ireland, founded upon the imposture which formed the subject of my refutation, authorizing the inhabitants of the sister kingdom to be dragged from their homes, and to be immured in pest houses, by compulsion, when *suspected* of labouring under a *soi-disant contagious* disease.

“Imposing on the already overburdened people of Ireland, under similar unfounded pretexts, considerable additional taxes, to defray the expenses of building, and permanently maintaining, *soi-disant contagious* fever hospitals.

“Multiplying, by the effects of the terror occasioned by these unnecessary and pernicious measures, the otherwise inevitable sickness and mortality.

“Expending not less than half a million sterling *annually*, at home and in our colonies, in the maintenance of establishments emanating from doctrines demonstrated to be unfounded, and to have originated in fraud.

“Refusing to abolish quarantine in England, or to inquire into the expediency of so doing, after it had been shown, by undeniable facts, that even if contagion were admitted to exist in the plague of the *Levant*, quarantine could have no object in *England*.

“Declining to appoint a commission, or to take any other efficient step, for prosecuting the inquiry concerning the validity of the doctrine of contagion in epidemic diseases, notwithstanding I had proved the reports of the College of Physicians, in affirmation of that validity, to be frivolous and unfounded, and the report of the select committee of the House of Commons, to be irrelevant or unintelligible, or, in as far as its meaning could be defined, in direct opposition to the facts of the evidence laid before them.”

Here it is seen, that during this protracted discussion, the calamitous and affecting event in the British empire, and particularly in Ireland, of a malignant fever among the poor, already distressed by want and famine, called forth legislative provisions; but, alas! again in a country where

his own case, treated by splints, as is usual in fractures of the leg, leaving a deformity and lameness eighteen months after the accident.

Charles Bell, in treating of fractures of the fibula, distinguishes those produced by indirect and direct causes. He considers the former the most serious, and accounts for them in the same way as David. His treatment consists in placing a splint on the outside to push the foot inward, with lint between it and the limb, and maintains the whole by an 18 tailed bandage. The leg is flexed on the thigh, and laid on the outside, which must increase the pressure of the splint on the leg by its weight; besides, that the weight of the foot tends to turn it outwards, and counteract the indication.

Mr. John Howship has more recently published (1816) remarks on this accident, by which it would appear that lateral splints are still in use in England. Two cases related by him show the incompetency of such means, and that a machine has become necessary to remedy the inconveniences resulting from the accident. This machine he describes.

From this sketch of the state of the subject, mostly drawn from the French surgeon, it will be seen that this branch of our art is still very imperfect, and affords ample room for improvement. I know of no treatment in our own country which avoids the evil pointed out; and it remains now to see what Mons. Dupuytren has done to overcome the difficulties attendant on cases of this kind.

### ANATOMY OF THE PARTS CONCERNED.

Before treating of the accident, it may be proper to take a short view of the parts concerned in this articulation, and call to mind our knowledge of its structure. Mons. D. speaks very much in detail on its anatomy, but does not seem to have contributed any thing new on this part of the subject.

This structure consists of hard and soft parts, of resisting and moving powers.

It will be recollected, that the tibia and fibula concur to form a mortise for the reception of the head of the astragalus, the two sides of this mortise forming the maleoli, the external of which, formed by the fibula, is considerably longer than the internal. These bones are connected to each other, and to those of the foot, by strong ligaments, especially by the one passing from the internal maleolus to the astragalus, calcis, and naviculare, at the inner ankle; and three at the outer ankle, of which, "the middle one, strong and thick, passes downwards from the end of the fibula, to be inserted into the outside of the os calcis. The anterior and posterior pass also from the external maleolus, and are inserted into the anterior and posterior portions of the astragalus." (Wistar.)

The moving powers, or muscles that move the foot, may be considered as of four different kinds, viz. as they produce flexion or extension of the foot, or its motions in depressing and elevating the toes, and the motions of adduction and abduction, or turning them inward and outward. The foot then is acted on by these different kinds of muscles, whose tendons run over the joint.

The extensors are necessarily the strongest, and are aided by the flexors of the toes as auxiliaries.

The flexors are less powerful, but more numerous, and have the extensors of the toes as auxiliaries.

The adductors and abductors by themselves, are perhaps nearly equal. The former, however, have the disadvantage of acting on the shortest lever, but the auxiliary aid derived from the extensors of the foot, give them the superiority in a state of integrity of the joint, owing to their being then less restrained by the internal maleolus, which is shorter; so that, when the resistance to each is the same by fracture of one or both maleoli, the abductors have the advantage, for the inequality of the levers is not suffi-

wherein the plague might be treated, and its causes investigated, at a small expense, (£5000 or £6000,) and thereby secure great advantages to the crown, to commerce, and to the cause of humanity, as we will hereafter explain. But here his disappointments commenced, and his attempts to meliorate the present system of quarantine, have been pursued through a thousand rebukes and tergiversations. It would be impossible for us to notice and relate every progressive cause of opposition in the various subordinate branches of the government, for a full account of which we refer the reader to the work itself. When we consider the great facilities and ample provision which the British government are in the habit of extending for the advancement of general improvement, we are not a little surprised that they should, in this instance, and as it appears to us, without sufficient cause, reject or neglect the experience and valuable services of one of their own subjects, who had done, at the imminent hazard of his life, much more than any other European philosopher or physician had ever thought expedient to attempt.

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“Refusing to abolish quarantine in England, or to inquire into the expediency of so doing, after it had been shown, by undeniable facts, that even if contagion were admitted to exist in the plague of the *Levant*, quarantine could have no object in *England*.

“Declining to appoint a commission, or to take any other efficient step, for prosecuting the inquiry concerning the validity of the doctrine of contagion in epidemic diseases, notwithstanding I had proved the reports of the College of Physicians, in affirmation of that validity, to be frivolous and unfounded, and the report of the select committee of the House of Commons, to be irrelevant or unintelligible, or, in as far as its meaning could be defined, in direct opposition to the facts of the evidence laid before them.”

Here it is seen, that during this protracted discussion, the calamitous and affecting event in the British empire, and particularly in Ireland, of a malignant fever among the poor, already distressed by want and famine, called forth legislative provisions; but, alas! again in a country where

no tropical or Levantine plague is ever known to have been imported, Parliament, which could not give them bread or clothing, gave them *pest*, and *soi-disant contagion* hospitals to be immured in. The better to depict what part the contagionists of England had in thus aggravating the misery of their fellow-citizens, we will transcribe a part of the letter of Maclean to the College of Physicians, through their President, Dr. John Latham. (page 125.)

“Upon the investigation respecting epidemic diseases, at all times highly interesting, the calamities which at the present moment so heavily afflict these kingdoms, may be said to confer an awful addition of solemnity and importance. Concerning the cause of the epidemic actually prevailing, imbecile and very deleterious doctrines continue to be pertinaciously disseminated; which are unhappily accredited, and acted upon, by persons in authority, upon the fallacious ground of the presumed experience of their authors.

“It cannot be unknown to the College, that the fever which has for so long a period existed in various parts of the United Kingdom, (I speak from authentic materials,) has been for some time past regularly and considerably increasing; and that, of the discontinuance or abatement of this progression, there is no present appearance. In my humble view of the subject, the prospect before us, whether in respect to deficiency of food, or of employment, or to general mental depression, among the labouring classes of the community, (in concurrence, even without the aid of any marked epidemic constitution of the air, powerful causes of pestilence,) is such as is not calculated to remove the apprehensions which may with too much reason be entertained, of the probable continuance and increase of the existing epidemic, among the great bulk of the people, in those districts of the kingdom which are most obnoxious to the particular causes mentioned.

“It is the most distant thing from my wish to excite unfounded alarm; and I do not speak without premeditation.

It may be recollected, that, in January, 1817, in a pamphlet, entitled ‘ Suggestions for the Prevention and Mitigation of Epidemic and Pestilential Diseases, comprehending the abolition of Quarantine and Lazarettos, with some opportune remarks upon the danger of Pestilence from scarcity,’ &c., I predicted, with some degree of accuracy, the calamities, in respect to sickness, which have since happened, upon grounds similar to those upon which I now again venture to take a prospective, but melancholy, view of our situation. I then took all the pains in my power to impress the importance of my observations upon persons in authority ; but owing, as I must presume, to the counsel of their medical advisers, with little acknowledged effect : and it was not till fifteen months afterwards, (towards the end of the last session of Parliament,) that the subject was introduced to the notice of the Legislature.

“ Upon this important and critical occasion, did the College institute any inquiry, or adopt any means, to aid the government, or enlighten the public ? On the contrary, did not all their measures tend directly to suppress or discourage inquiry, and to prolong the ‘ darkness visible’ of the fraudulent doctrines of the monastic ages ?

“ Aware of the delusions to which the Committees of the House of Commons, appointed to investigate the fevers of the Metropolis, and of Ireland, would inevitably be exposed, by the misleading and inappropriate evidence which would certainly be presented to them, I addressed, at the commencement of their labours, (shortly after the period at which the advice of the College to continue quarantine and lazarettos had been communicated to the Privy Council.) a letter to each of the Chairmen of these Committees, accompanied by a copy of my work upon epidemic diseases, of which the second volume was then just published, warning them of the direful consequences of accrediting the doctrine of contagion, and of acting upon it, in the event, but too probable, of the further spreading of the fever.

“ The Committee, however, misled, as I had foreseen

and predicted, by the *testimony*, in such case improperly called *evidence*, which had been submitted to them, thought fit, following the authority of the College, to consider all previous inquiry, as to the grounds of the belief in its existence, superfluous, and to assume contagion as the cause of the prevailing malady, in the very titles of their reports. And upon this erroneous assumption were founded those legislative measures in respect to Ireland, which, at the time, I strongly predicted would prove pernicious, and which are now acknowledged, from authority, to have wholly failed.

“I conceive I have now a right to expect that the correctness of my reasoning and predictions heretofore upon these matters, should ensure for my observations, in what regards the future, a greater share of attention. But, on the contrary event, I will here hazard one prediction more, which is, that reasoning, experiment, induction, and all the appropriate modes of scientific evidence, failing to produce conviction, or to excite efficient inquiry, the very extremity of the evil quadrupled by the means which are adopted to avert it, will, the calamity extending, bring sorrowful proof of the folly of trusting to the *dicta* of a presumed experience, which consists but in the daily practice of a delusion, and can only confer additional dexterity in the application and defence of error.

“I may further add, that if, in addition to the existing more permanent causes of sickness, vicissitudes of weather, or extremes of temperature of more than ordinary intensity should occur, the adventitious causes of mortality, constituted by the consequences of the belief in the doctrine of contagion, being superadded in an accredited form, this only is required to put the climax to our misfortunes. Under a somewhat greater extension of the prevailing disease, the proportion of mortality to sickness, which, form the nature of the proper causes that have hitherto almost solely been in operation, has been but inconsiderable, would, un-



der the influence of the adventitious causes, authoritatively set in motion, be multiplied in a dreadful degree."

In the final remonstrance and solemn protest of our author to the Lords of the Committee of the Privy Council for trade, &c. he has declared, that as the British ministry have refused to enter on any investigation of the nature of plague, for the purpose of establishing proper and wholesome quarantine regulations, which other powers have shown a willingness to co-operate in, he has determined to turn from them, and by publishing the work before us, make an appeal to the world at large. We have a peculiar interest in the present system of European quarantine, from the additional restrictions it imposes on us on account of the yellow fever; and we feel gratified, that while our commerce is free from the shackles of a national quarantine, our regulations are as effectual as situation and circumstances will admit, in securing us from the ravages of pestilence; and that they will finally demonstrate to the world that they are founded on correct views of these diseases, their generation, and propagation.

The statutes of our maritime states on this subject are directed not so much against the barefaced chimera of human contagion as against the vessels trading to places within the tropics, and the corruptible goods they convey: both of which, it has been satisfactorily proved, are capable of producing malignant fever among the crews, and the inhabitants of a city exposed to their influence: accordingly, our laws oblige such vessels to be cleansed and purified before they come to the wharves of our cities, and their corruptible cargoes deposited at a distance from the dense population of the seaport towns. It is the remarkable character of the yellow fever pestilence to be more frequently generated at sea, by the ordinary filth collected in the holds of vessels, than the plague of the Levant, which is said never to be imported or communicated by wearing apparel. But we have, nevertheless, seen vessels arriving at Marseilles, from the Levant, with clean bills of health, whose

cargoes of cotton were taken into the Lazaretto for ventilation, and many of the labourers employed in this duty have been attacked with malignant fever, and died, whilst the crews on board at quarantine have remained healthy.\* If, however, it be true that the plague is not so liable to be caused in this way as the yellow fever, it exhibits a marked difference between two diseases, that have a common origin, and have simultaneously prevailed in certain seasons in the same place; as was the case in the plague of Marseilles in 1720, when thousands perished with black vomit and yellowness of the skin. The same concurrence happened during the prevalence of the yellow fever in Philadelphia in 1793, where the writer of this article treated two fatal cases of bubo, and one of carbuncle. The two diseases, in different times and places, also exhibit a protean and diversified type, that is calculated to mislead the practitioner who does not extend his views to a full consideration of the causes which may modify various epidemics. The Levantine plague, like the yellow fever of this country, has its gastric derangements, its dysenteric and hemorrhagic fluxes, as well as its walking, and cold cases with partial suspensions of the intellectual functions: both in their prevalence are limited to a short duration; and some of their recoverable cases equally assume the forms of ordinary fevers, and are cured by diaphoresis, hemorrhages, and other evacuants; but not a single fact can be produced of either disease being propagated by a subtle poison, provided a pure and cold atmosphere shall exist to dispel or correct the invisible pestilential mantle that has been spread over an ill-fated city.

It is absurd, and makes nothing for the doctrine of the contagiousness of the plague, to adduce the instances of one or two European physicians having inoculated persons who afterwards were affected with the disease, when in all these cases the persons so inoculated were exposed to an

\* This fact was observed by Dr. Felix Pascalis, a Member of the Medical Society of Marseilles, and for five years a resident of that city.

infected atmosphere, and in that way liable to take the disease. To rebut the conclusions that some are disposed to draw from such facts, we can bring the testimony of twenty faculties, of twenty states, and more than twenty years experience, against the existence of *human contagion* in any form of our yellow fever. We have, moreover, the diversified and conclusive experiments of the late Dr. Firth, of South Carolina, made in Philadelphia in 1799. He exposed himself for many hours in a close room to the vapour of boiling black vomit; he also swallowed six ounces of it, and twenty pills of the inspissated material, and all without any effect:—but we cannot at present proceed further in the discussion of this important and interesting subject; and we leave it, relying on the impressive and satisfactory statements of Dr. Maclean to produce conviction in the minds of the candid and disinterested. We wish him, in his country, as much success in the work of reforming this abuse quarantine and contagion laws, as our venerable predecessors have obtained in guarding us against their adoption here. If, after all that has been adduced, the British ministry still adhere to their errors, we think we may, with the author, say of them what Lord Orford said of the Monks of old, “Whenever a ray of light breaks into their cells, they are ready to cry fire! fire!”

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## COLLECTANEA CLINICA.

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*Case of Irritability of the Stomach, attended with alarming symptoms of Debility, successfully treated by the internal administration of Ice—by JAMES R. MANLEY, M. D.*

JOHN HOWARD, of New-York, of a sanguine temperament, and firm constitution, aged twenty-two years, was attacked with typhus fever, under which he suffered 22 days, before any signs of convalescence were apparent; he was much emaciated, and, as might be supposed from the duration of his disease, extremely weak. While in this condition, he was permitted to indulge himself *ad libitum*, in eating some savoury, though indigestible, food, and was shortly afterwards afflicted with singultus. At first, no particular attention was paid to his situation; but the complaint continuing, I was requested to visit him at 9 o'clock in the evening of the 21st July. Knowing what had been his previous state, I merely inquired into the cause of his present indisposition, and how long it had continued: I was satisfied that the cause was sufficient to account for his symptoms; and believing it to be the labour of an indigestion, which would soon subside, I prescribed a moderate dose of laudanum and ether, with directions, in case it was rejected, to give the Riverian mixture in effervescence  $\overline{3}$ i every hour and a half.

I visited him on the next day, (22d.) and was informed that he had vomited the anodyne draught, and the offending material, (the soft crust of a boiled pye,) but that his hiccough had continued during the night without much intermission, although he had some sleep. He was directed to continue the effervescing mixture with the addition of some tinc: opii: and to have applied to the epigastrium hot



fomentations of spirits and vinegar. At evening, singultus more distressing; had vomited several times during the day; pulse small, frequent, and feeble; skin cool; tongue dry, but clean; desires cold drinks, which are rejected a few minutes after being swallowed; no evacuations from the bowels since the commencement of the present attack. He was directed to take the following medicine:

R. Gum: Camphor.

℞i.

Mosch:

gr. viij.

Gum: opii:

gr. v. M. div.—in pill.

vi.—sumat i. qq. 2d. hora.—to have a blister applied to the region of the stomach, and lemonade in small quantities for his drink.

23d.—The patient is no better; the pills were rejected, and vomiting was so painful, that he begged to discontinue them; when tinc: lavend: comp:, tinc: castor:, aq: ammoniæ, and other stimulants and antispasmodics were by turns substituted for the remainder of the night; his blister had drawn well, but there was no remission of his symptoms, which began now to assume a serious character. The pulse was frequent, small, and feeble; skin cool, particularly on the extremities; pupils dilated, and I thought that I could perceive some wandering of intellect; hiccough not so frequent, but very painful and exhausting. I now determined to alter his plan of treatment, for no other reason than that the one pursued was found to be utterly useless. Blisters were directed to be applied to his arms and the calves of the legs; sinapisms to the feet; *cold* (iced) punch to be given him to the extent of a pint in four hours, and 30 drops of sulphuric ether, in some very cold drink, every hour. 3 o'clock—Hiccough still continues very distressing; more heat of skin, and some febrile excitement: directed to have a cathartic enema, and if it operated more than twice, to arrest the catharsis by an injection of starch-water and laudanum. *Evening*—The appearance of the patient generally improved; there was no necessity for the anodyne injection; directed to continue the treatment, but

to allow the blisters to remain applied, in the hope that some strangury might be induced. His hiccough still continues.

24th.—The patient is much worse : pulse small, frequent, and at the wrist scarcely perceptible ; extremities cold, and skin about the neck and chest moist ; blisters pale ; great prostration of strength, and extreme anxiety as to the event of his disease ; hiccough as frequent as heretofore, but not violent. Believing that he could not survive many hours, I seated myself by the bedside, intending, as opportunity offered, to apprise him of his situation. After a few moments conversation, he perceiving the drift of my remarks, asked me, with peculiar emphasis, whether I could do any thing more for him ; to which I replied, that I had done all that I had known others to do in such circumstances ; but there was still one remedy which I had not tried, because the experiment was hazardous, and in place of recovering him, it might expedite his death. He was anxious to live, and begged that I would persist in remedies, however small might be the prospect of benefit from them. I accordingly proposed to give him ice in substance, which he was not only willing but desirous that I should do.

I had been of opinion, that the introduction of some dilute acid, followed by a neutral salt, which, by being decomposed in the stomach, would produce a great degree of cold, might be essentially serviceable ; but I was deterred from exhibiting them, from the fear, on the one hand, that I might produce too great a degree of cold, and on the other, that the new compound might prove violently cathartic—in either of which cases, my patient would be seriously injured, perhaps destroyed ; I therefore determined now to introduce into the stomach ice, in such quantities, and in pieces of such size, as should require some time for their solution, and sent immediately for the article, broke it into small parts, and threw them into warm water, in order to take off the sharp edges of the fragments. I gave half an

ounce at a time; he took three spoonful in succession, and was much relieved on the instant. I remained by him an hour, during which time he had taken about four ounces; his hiccough was suspended for a longer time than it had been since its commencement; he continued its use till he had taken nearly one pound, at the same time drinking cold wine or spirit whey, and having warm fomentations applied to his extremities and lower part of his abdomen. After two hours, I had the satisfaction to observe that his hiccough had entirely ceased; the use of the ice was accordingly suspended, and his final recovery confided to the due administration of moderate stimuli and light food, which completely restored him in a few days. His amendment was rapid, and his cure perfect.

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*A Case of Intestinal Intrafætation, communicated by  
Professor POST, of this city.*

Washington, D. C. March 24, 1819

SIR,

I send you, by my friend, the hon. David A. Ogden, a tumour, with hair, and two incisor teeth, taken from the rectum of a puny female child. The tumour is much lessened in size in consequence of being for some time accidentally exposed to the atmosphere. On examination, it was found to contain a small portion of bony matter.

The following statement is given from facts furnished me by Dr. M<sup>c</sup>Williams, a highly respectable physician of this place, who has attended the child from infancy, and who took from her the tumour:

Miss H. aged 12 years, residing near the navy-yard, experienced ill health from infancy, attended with a sallow complexion and enlarged abdomen. These symptoms were attributed to worms, for which she was treated with a va-

riety of anthelmintic medicines, at different times, without relief. In May, 1818, she was afflicted during several days with pain and uneasiness in the bowels; at length, having occasion to visit the privy, while there, something, as she said, appeared *to give way suddenly* on the left side, in the direction of the descending colon, and was immediately followed by a profuse discharge of bloody water, which exhausted her, and produced syncope. She was found in this state, and conveyed into the house. During several weeks afterwards she suffered severe paroxysms of pain, similar to those of a woman in labour, accompanied by a discharge of bloody matter, occasionally mixed with pieces of matted hair. At the expiration of four weeks after the rupture, hair several inches long presented at the anus, and was removed with a pair of scissors by the child herself; shortly afterwards, a tumour, about the size of a common orange, protruded through the anus, partly covered with hair, and containing two complete teeth. This tumour was attached by means of a neck to a larger body. The Doctor used great efforts to relieve the child of the remaining substance, without success. Dr. Cutbush, of the United States' navy, accidentally saw her in this state, and supposed, from the great resistance, that the body was attached to the rectum. Dr. Hamilton, of the navy, attended the child in company with Dr. M-Williams, and after exhausting their best efforts without relieving her, and finding that the anus and surrounding parts were becoming much irritated and excoriated by the tumour, they passed a ligature around the neck, and separated it with a scalpel: the divided surface exhibited numerous blood vessels. The case was now left to nature, and the child being extremely emaciated, was treated with tonic medicines and a cordial diet.

The remaining body was at length destroyed by the process of putrefaction, and gradually passed off in a dissolved state; since which the health of the child is greatly im-



proved. She has at this time a bright complexion, and the abdomen is free from tumefaction.

I have the honour to be,

with high respect and consideration,

Your obedient servant,

HENRY HUNTT.

Dr. Post, New-York.

This extraordinary production is now in the possession of Dr. Post, and there can be no doubt of its nature.—ED.

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*Account of a successful Operation for a Congenital Division of the Velum of the Palate and the Uvula—by M. Roux, Chirurgien-en-chef adjoint de l'Hopital de la Charité.*

THE patient was a young man, in whom the velum of the palate and the uvula were completely divided, as a congenital malformation: the voice was altered, as it commonly is in similar cases. The two edges of the division could be easily approached to each other; the mouth was large; the pharynx not very sensible; and the patient earnestly desired to have something done for his relief. Every thing concurred to favour the attempt of the operation.

M. Roux first passed three ligatures of waxed thread through the parts to be united, by means of a curved needle mounted on a handle: this prevented the too great retraction of the parts, from the irritation produced by the instrument in removing the edges of the velum and uvula, which was done to the extent of about half a line on each side: the ligatures were then tied, and the threads cut close to the knots.

Immediately after the operation, the voice became like what it is in the ordinary state. The patient was ordered to abstain wholly from food for three days, and to preserve perfect silence. In a few days the union was complete;

but the two margins of the uvula are not perfectly correspondent: one of them descends a little lower than the other; and M. Roux intends to remove the projecting part by excision.

*London Med. and Phys. Jour.*

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### SCUTELLARIA LATERIFLORA.

WE have never been backward in expressing our want of confidence in this new remedy for Rabies Canina: we have always ranked it with Anagalis, Stellaria, Alisma Plantago, and a multitude of other boasted specifics, which have occupied the public for a day, and then given place to some other trifle, equally inefficacious. Our opinion of its merits were not in the least altered by the perusal of Dr. Spalding's tract, recording, upon vague authority, its numerous cures. Indeed, we never suspected that gentleman to have given much credence to the loose and often repeated tales of its sanative powers. All that he attempted to do, and which we think he has fully accomplished, was to lay before the public the testimony on which its efficacy rested, in order that they might know how to appreciate the extravagant encomiums that unprofessional men had bestowed on it. Accordingly, when an article appeared in the *Journal Universel des Sciences Medicales* of Paris, noticing his pamphlet, as containing several hundred cases of hydrophobia cured by the use of that plant, he immediately, with a candour and frankness that will always distinguish the modest and scientific practitioner from the bold pretender, sent for insertion in this paper, a letter addressed to the Editors of that Journal, in which he declares, that they have misconceived his meaning: that it was his intention merely to relate what had been said of the remedy, and its use, without expressing any opinion of its value.

For our part, we never mistook the scope of the pamphlet, believing the author to be too conversant with the history of this terrible malady to credit for a moment so absurd an assertion, as that any thing like the number of cases given, could have occurred in this country during the period spoken of. Independently of this want of testimony, we admit there were other powerful reasons which induced us to believe that it did not possess active medicinal properties; such especially as we should expect to find in an antidote for such a disease. We refer to its being wholly devoid of any sensible active properties: its taste being merely herbaceous; the fact of cattle feeding on it, as on ordinary grass, whenever it occurs in their pasture grounds; and, finally, its belonging to one of the most natural and best defined orders of plants, most of whose medicinal properties are well known, and not one of which possess any active venenose power.

Entertaining such ideas of *Scutellaria*, we confess we did not expect ever again to have occasion to take any further notice of it; but some accounts we have lately received from a most respectable quarter, attest to its power in two cases of spasmodic disease, which had resisted all the ordinary remedies; and we have thought proper to present our readers with the details of these cases, in the hope that others may be induced to employ the plant, and bring its merits to the test of experience. If it should be found in future trials to exert such influence over morbid muscular action in any disease, as the following cases warrant us to expect, then, indeed, may we cherish some hope that it may exert a special one, over that most terrible malady, which has heretofore proved so rebellious under every mode of treatment which our art has been able to devise.

*Case of Chorea, treated by Scutellaria Lateriflora, communicated by Dr. JOHN NEILSON, of this city.*

EARLY in July I was called to visit the son of Mr. W. Cairns, of this city, aged fourteen years, whom I found affected with Chorea, chiefly exhibiting itself in the muscles of the right side: his disease was rapidly increasing in violence, and gave great disquietude to his parents. After evacuating him freely by the stomach and bowels, I put him on the use of the usual antispasmodic remedies, combined with tonics; but principally trusted to an infusion in cider of Rad: Armorac: Coch:, Sem: Sinap: Alb:, and Carb: Ferri. This course was pursued for eight weeks without producing any benefit; when his father wishing to send him into the country, I proposed to discontinue these medicines, and make trial of the *Scutellaria Lateriflora*, strictly pursuing the directions given by Lewis for its use in Rabies Canina.

On the third of September he commenced the remedy, by taking a wine glass full (ʒij) thrice a day of the infusion prepared, by pouring one pint of boiling water on ʒss of the dried plant; every fourth day he was directed to suspend the use of the infusion, and to take of Flor. Sulphur. ʒij: the use of milk, gravies, butter, &c. as well as vinous and spirituous liquors, was interdicted. After taking the medicine for some time, his gums became swollen, inflamed, and tender, and he exhibited other symptoms of ptyalism, on which account it was discontinued for a few days, until these appearances subsided, when he resumed its use; it was also attended with considerable diuretic effect. The patient had not been long under this treatment before the disease evidently abated, and entirely disappeared by the first of October, when the remedy was discontinued; since which time the young gentleman has enjoyed perfect health.



*A Case of Anomalous Spasm successfully treated by the Scutellaria Lateriflora, extracted from a Letter addressed to Dr. JOHN BARNES, of Poughkeepsie, by Dr. JOHN BOGARDUS, of New-Paltz, dated September 20, 1820.*

I was called, in the month of November, 1813, to visit a young lady, about 15 or 16 years of age, who had previously enjoyed good health, but was now suddenly attacked with a violent spasmodic affection, which the family supposed to be caused by the practice of smoking her head for a severe toothach. She had, however, a slight attack some months before, without any apparent cause. I found her severely afflicted, the spasm most generally commencing in the muscles of the neck, drawing her head with great violence alternately from one side to the other, and backwards and forwards; when it would cease in the neck, and attack the arms with similar violence: then ceasing in the arms, it would attack the muscles of the abdomen, thorax, and trachea, so as to suspend respiration for some minutes; sometimes affecting the trachea in such a manner as to cause a disagreeable noise in breathing; at other times affecting the whole body, so as to raise her erect in her bed, in spite of all the exertions of her assistants: this, however, was not the case in every paroxysm. This is giving you a general idea of her affection, during the whole course of her illness. Her pulse was most usually full, and countenance florid, during the paroxysm; the attack was generally preceded by a slight headach; although sometimes she had no notice of its approach.

Finding her pulse full, I immediately bled her, which for a few minutes relieved the spasms; they, however, soon returned. I then gave her a large dose of opium, combined with castor, which was repeated in about an hour, and seemed to overcome the spasm. She was then put under a course of antispasmodic medicine for about a week, and her complaint subsided. It, however, returned again

in December, and continued, with some intermission, till the following April, when it recurred more frequently. The same course of medicines was continued, and persisted in, together with blistering. She continued free from any attack till March, 1815; but from that time till November, 1818, she had frequent returns, though of short duration. Opium, scetid gums, castor and valerian, afforded temporary relief. Electricity was tried in different forms, and persevered in for some time, but without any apparent benefit. During the months of November and December her complaint wore a more serious aspect, recurring almost daily, and in a very violent degree. As the medicine which had hitherto been given proved merely palliative, another course was pursued, and mercury was now given, so as to produce ptyalism. This seemed to have an encouraging effect; from the moment her gums became affected, her spasms ceased. This plan was persisted in about two months, when she became extremely weak. Bark and chalybeates were then substituted. After a few weeks. her attacks again returned, but not so severe: they continued through the summer, with some intermission. In November, however, they again returned with equal violence as at first. Her pulse being very full, she was repeatedly bled, and active cathartics administered, but with very little effect. Digitalis was resorted to, as her pulse was frequent; which, indeed, reduced her pulse to the natural standard, but had no effect whatever upon the spasm. Antispasmodics and Calomel were again tried in succession, but were found of no avail. Opium now was given at every return of the attacks, (which had become of daily recurrence,) and so extreme were her spasms, that it required from six to eight grains to afford relief. Hope had now fled, and we despaired of her recovery; something else must be resorted to, or the case abandoned: several physicians had been consulted, but nothing new was prescribed. Having at this time read in the Evening Post of the curative effects of the scullcap in cases of hydrophobia, and reasoning from

analogy, that what will cure a higher grade of spasm, would consequently cure a lesser, it was accordingly procured and given, as prescribed by Lewis, in cases of hydrophobia, together with sulphur every other day, for a month. Strange as it may appear, this violent disease submitted, as if by magic, at once. She has had no return of her complaint from the first day it was used, till the present. She continued the use of it some weeks; took no other medicine, and has been in perfect health, as respects her spasmodic complaint, ever since; a period of about ten months.

The cause of her complaint to me has always seemed very mysterious. She appeared to enjoy tolerable health in all other respects; her Catamenia have been regular during the whole of her indisposition, and unattended with fever, or any local affection.

We are indebted to William Coleman, Esq. for the letter detailing the above case.—Ed.

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*A Case in which Gastrotomy was performed, by  
Dr. CAYROCHE, of Mendes.*

A FEMALE, aged 24 years, with a view to excite vomiting, introduced into the œsophagus a silver fork, which produced so violent a contraction in the part, that the instrument escaped from her hand, and passed into the stomach. This foreign body remained in that viscus for three months, without producing any other uneasiness than a sense of heaviness. It could be distinctly felt externally; the handle lying in the right portion of the epigastric region, about two fingers-breadth above the Umbilicus, and the pointed extremity just below the lower edge of the Liver. In the fifth month after the accident, violent vomiting supervened in consequence of an indigestion, which changed the position of the fork: the handle was now felt two fingers breadth

above the Umbilicus, and about two inches to the left of the Linea alba; the other extremity appeared to be situated in the right hypochondriac region, and very near to the vertebral column. From this time she suffered violent pain in the affected part, and her health gradually declined. A return of the vomiting was followed by an evident swelling in the region of the stomach, which increased to a considerable volume in a few days.

On the first of May, 1819, two hundred and twenty-nine days after the accident, Dr. Cayroche performed the operation of gastrotomy. He opened into the abdominal cavity by making an incision of ~~two~~ inches on the most elevated part of the tumour; the stomach was then opened, and the fork extracted without difficulty. In order to avoid any laceration of that viscus, he carefully relieved with the scalpel the points of the fork that had penetrated into its substance. The ordinary dressings were applied to the wound, and the patient perfectly recovered from the operation in twenty days; since which she has continued to enjoy good health, entirely free from any pain or uneasiness in that region. The swelling of the epigastrium has also totally disappeared.

*(Journal Général de Médecine de Paris.)*

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*The Operation of Gastrotomy performed at Sedan, by Dr. Carré, for the extirpation of a Cancerous Tumour of the Omentum, situated in the Umbilical Region.*

THE subject was a female, aged 29 years, of sanguine temperament, and good constitution. Before her present disease, she had suffered no material constitutional derangement, except that after her first confinement the abdominal integuments lost their tone and contractility, fell over on the thighs, and hung down in the form of a flap; which condition was never removed.



During her third pregnancy, she received an injury by falling upon her left side, which, at the time, attracted very little attention. The tumour appeared toward the termination of her fifth pregnancy, and began rapidly to increase in size after her delivery, attended with lancinating pains, symptomatic fever, indigestion, frequent vomiting, disturbed sleep, leuco-phlegmatic countenance, inability to walk, except by bending forwards, and supporting the abdomen, with other alarming symptoms, that indicated her approaching dissolution.

On the 18th of February, 1819, a consultation, composed of Doctors Carré, Thermonia, and Maréchal, was held, when the tumour was found to have increased greatly in volume, and to be easily raised, or moved, without causing any pain or uneasiness to the neighbouring viscera: from which circumstance, it was judged to arise from the Omentum, and not to be extensively connected with the subjacent parts. Its removal was thought feasible, and the hazards attending it were fully explained to the patient, who decided on submitting to the operation. It was performed by Dr. Carré, assisted by his colleagues. The patient was placed horizontally on a table, with the thorax and thighs a little elevated, and a transverse incision of seven inches long, was made equidistant from the point of the Xyphoid cartilage and the Umbilicus, of which two-thirds extended to the left of the Linea alba. The second incision descended from the first in the course of the Linea alba to about four inches below the Umbilicus: the operator avoiding this cicatrice by a semi-elliptical sweep. The integuments of the angles formed by the junction of the two incisions, were dissected from the anterior surface of the tumour, to which they strongly adhered; some small arteries, that had been divided, were now secured by ligature, and the dissection continued till the anterior and lateral surfaces of the tumour were wholly detached from the surrounding integuments, when two strong ligatures were passed through its substance by means of a long nee-

dle, and given to an assistant, by which the tumour was commanded without interfering with the operator. A small portion of Omentum, that had protruded, was now replaced; and by passing the hand under the tumour, it was found to have slight attachments to some of the intestines, which were readily overcome by the fingers; but those to the Omentum required the scalpel for their separation. The tumour was then raised up, and by giving it a rotatory movement, it was discovered to be connected by a membranous band, five inches broad, to the Colico-gastric omentum, which was also divided, and the tumour removed. At this time, the patient exhibited very alarming symptoms, and it was apprehended that she would expire on the table; she became deadly pale, with short and interrupted respiration, bilious vomiting, and distressing hiccough; her pulse was feeble, languid, and scarcely perceptible. During the whole operation, she had not uttered a groan; and perhaps these alarming symptoms may be partly attributed to the great exertion her extraordinary courage and resolution enabled her to make. In consequence of her condition, the dressings were expedited as much as possible; the intestines were cleansed by a tepid mixture of wine, oil, and water, and all coagula carefully removed; the angle of the left flap was connected to the integuments above by an interrupted suture, and the other parts of the wound brought together by adhesive straps; compresses and pledgits of lint were then placed in the course of the wound, and the whole secured by a many-tailed bandage, passed around the body. The patient took a little warm wine diluted, and was carefully laid in bed, with the head, thorax and thighs somewhat elevated, and supported on pillows.

The consequences of this operation were very serious; many times during the cure the patient's situation was very perilous; the incisions, however, were completely cicatrized by the twenty-ninth day; but in the mean time she had two depositions of a sero-purulent matter in the left hypogastric region, which continued for some time after to

discharge very foetid pus. In the latter part of April, she had so far recovered as to be able to leave her chamber; and in a few days after, she returned to her mother's residence, where she soon regained her former health and gayety. Toward the latter part of May she became suddenly affected with deep melancholy, attended with disordered digestion, bilious vomiting, spasms, &c. which were soon followed by a typhoid fever; and she died on the 6th of June, three months and six days after the removal of the tumour. No autopsic examination was made.

*Description of the Tumour extirpated.*—Its form was that of an oblong spheroid, with the anterior and posterior surfaces flattened; the vertical diameter was ten inches; the transverse eight and a half inches, and the conjugate six inches. The anterior surface had adhered to the integuments above, for about two-thirds of its extent, in the centre of which was a tubercular eminence, and at the side a furrow four inches long and five lines deep. The posterior surface was smooth, and showed marks of adhesion to the adjacent parts, only on the lower and right side; in the centre there was a purple spot about four inches diameter, and one and a half inches deep, which resembled an ecchymosis; a little below, on the left portion of the tumour, to the extent of five inches circumference, it seemed to contain a putrid sanies, of a dark gray colour. The covering, or capsule, was very fine, smooth, and diaphanous, except where it had formed adhesions with the neighbouring parts, or was on the point of ulcerating. On cutting into the tumour, the tissue was found to be firm, fatty, and homogeneous. It weighed six pounds and twelve ounces.

*Note*—The weight and dimensions given in the above case are after the French standard, in which the pound is equivalent to about one and a quarter of ours, and the foot to thirteen of our inches.

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## INTELLIGENCE.

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### *Gluten an Antidote for Corrosive Sublimate.*

It has been observed by TADDEL, that, on mixing either the deutoxide or deutochloride (corrosive sublimate) of mercury with the gluten of wheat, the latter separated from the water it contained, and, losing at once its viscosity and elasticity, became instantly converted into a hard body, capable of remaining for a long time under water without any dissolution or fermentation. He also observed that, on mingling wheat-flour with a solution of corrosive sublimate, it became impossible to separate the gluten from it in the form of strings. He concluded thence, that the mineral retained this substance, and that, by means of it, it combined also with the starch and other constituents of the flour. It appeared, then, that flour or gluten might serve as an antidote to sublimate, when administered as poison. Some experiments he afterward made, led him to believe that the gluten reduced the deutochloride to the state of protochloride, (calomel,) exactly in the same manner as albumen does; and that the gluten of wheat retained the mercury much more forcibly than albumen, recommended for the above purpose by Orfila. His experiments were made on rabbits and fowls. He administered, at first, two grains of sublimate mixed with flour or gluten, and gradually carried the quantity to fourteen grains in the course of ten hours, without causing the animals any apparent uneasiness. Some of them only, died at the end of three or more days, and he then always found the balls of gluten and the mineral entire in the digestive organs; which shows how easy it would be, after the administration of the antidote, to remove the whole by an emetic. Some com-



parative experiments proved that a single grain of sublimate, administered alone, would produce death in the above-mentioned animals ; and that, from twenty to twenty-five grains of fresh gluten, or half the quantity of it dried, are necessary to neutralize one grain of the mineral. A proportionate quantity of flour, then, mingled in a small quantity of water, would appear to be the best antidote to the sublimate ; and this can be more readily obtained than albumen in many situations. It would be prudent, indeed, for apothecaries to keep it ready in their shops for this purpose.

*Lon. Med. and Phys. Jour.*

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### Cold Rectification.

M. VAN MONS has made some interesting original observations, in his repetition of the experiments of Soemmering on the permeability of bladders and other animal membranes by water,\* and the application of this property to the cold rectification of alcohol. The principal experiment is the following : A jug filled with alcohol was covered by some animal membrane, such as the amnios, bullocks', calves', or pigs' bladders, the swimming bladder of fishes, &c. At the end of three months, the alcohol had lost from an ounce to an ounce and a half of its weight ; but this loss consisted solely in the aqueous part of the fluid, for the liquid, which was of forty degrees strength, had acquired forty-four. This result was constant in a series of experiments with different membranes. He has found this discovery of Soemmering extremely favourable, either for the cold rectification of alcohol, the concentration of saline solutions and vegetable acids, and to various chemical

\* Published in the *Annales Générales des Sciences Physiques*, No. I. Bruxelles.

operations, when it is necessary to separate water from any mixture which will not bear evaporation by fire.

*Lon. Med. and Phys. Jour.*

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*On the Nature and Properties of the Marsh Poison.*

Royal Society of Edinburgh, January 17.

DR. FERGUSON, Inspector of Hospitals, read a paper *On the Nature and Properties of the Marsh Poison*, as known under the titles of *Marsh Miasmata* and *Malaria*.

The author endeavoured to prove, from a reference to the medical topography of various places in the south of Europe and the West-Indies, that the universally-received opinions of aqueous and vegetable putrefaction, single or combined, being the sources of this poison, were unfounded; that putrefaction, under any shape, had no effect in producing it; that it never emanates from water in bulk, however putrid that water may be, nor is necessarily an exhalation from marshes: but some modification of the state of the atmosphere by heat and moisture, being the product of a highly-advanced stage of the drying process in absorbent soils that had previously and recently been saturated with water. The illustrations were principally taken from the countries where the author had served with the British armies during the last twenty-five years, and exhibited a great variety of observations in support of the opinions the paper professed to advocate. Other properties of the marsh poison, such as its particular adherence to, and attraction for, lofty umbrageous trees and rising grounds in the neighbourhood of swamps; its concentration in ravines, hollows, or leeward localities; its absorption from passing over water, and rarefaction or dissipation by the sun's heat, and regular currents of wind, were also pointed out and illustrated. In the course of the paper, the author, while treating of the effects of the marsh poi-

son, was led to consider its extreme and most baleful product, the yellow-fever of the tropics ; and he endeavoured to show the non-contagious nature of that disease, by a series of forcible arguments. It concluded with some observations on the mode of reception of the marsh poison into the human constitution, whether by the lungs, the stomach, or the skin, which last the author seems to think the most probable channel ; and he supported his opinion by some illustrations taken from the plague of the Levant,—the peculiar idiosyncrasy of the African or Creole negroes, &c.

*Lon. Med. and Phys. Jour.*

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To Doctors WILLIAM GEDNEY, of Milton,  
 JOHN BARNES, } of Poughkeepsie,  
 THOMAS COOPER, }  
 BARNABAS BENTON, } of Plattekill,  
 ADNA HEATON, }

*Physicians and Surgeons.*

GENTLEMEN,

The following precept is stated by Dr. Percival in the first chapter of his Medical Ethics, in relation to the professional conduct of Physicians and Surgeons, paragraph xii. "Should a case occur in which, ordinary modes of practice having been attempted without success, it would be advantageous to try new remedies, the accomplishment of this salutary purpose requires that we should be governed by sound reason, just analogies, and authentic facts, and by a previous consultation of physicians and surgeons," &c.

It appears that you have observed this wise rule in the management of the case of Mary Tice, of Milton, (related in the Evening Post of New-York, August 26th, 1820,) supposed in your certificate to have been hydrophobia, in consequence of the bite of a mad dog ; although you have thought proper to dispense with the usual surgical applica-

cations recommended for wounds inflicted by rabid animals.

The wound of Mary Tice spontaneously suppurated, and continued to discharge, as late as a month after you commenced her treatment; and by your remedies, of which there was a great variety, her cure has happily been effected. So far, gentlemen, you have done well for the safety of the patient, who has been equally protected by professional precept and professional attention: but, furthermore, if you wished to benefit the public by the publication of your observations on this case, it would have been highly meritorious,—provided you had forborne to give your decided opinion of its nature, and of the value of one of the remedies, which, having been used with many others, rendered it difficult to say which was the most efficient. The smallest possible chance of error in your judgment, made it necessary that it should have been previously revised by some regular medical tribunal; for if one or two of you had before felt it necessary for the safety of *one* patient to be aided by a consultation of physicians and surgeons, you will readily admit, that in giving your opinion to the public on practical points and inferences of such momentous importance, a probable danger of error or misconception, deserved at least to be equipoised by as admissible and weighty authority, as that which you thought proper to exercise. Such a mode of proceeding is plainly marked out by the above rule, which has become fundamental in the code for the regulation of our professional conduct; instead of which, it is really unfortunate, that you should have submitted your case and certificate to an Editor, who, in the language of Percival, has so “often indulged in an affected and jocular scepticism concerning the utility of the healing art.”

We may add another aggravating circumstance, although it was no doubt incautiously overlooked by you, which is, that by a tacit compact, you, as members of a fraternity engaged to promote the honour of the association by all those means



which are consistent with morality and the general good of mankind, have placed your professional acts under the auspices of a gentleman, who has neither professional responsibility to pledge, nor *esprit de corps* to cherish.

There are three material circumstances in the case of Mary Tice, which we cannot reconcile with your belief of its having been a case of *Canine Rabies*. Permit us, gentlemen, to address you some remarks on this subject, with a view to explanation, rather than controversy.

I. The *uncommon duration* of the disease, and its various and irregular symptoms.

II. The *late period* at which your remedies were applied.

III. The diagnosis of the disease, which resolves itself into Convulsive Hysteria.

I. On the first point, we maintain, that the last stage of the supposed hydrophobia, at which you visited Mary Tice, is seldom of longer duration than five days. The numerous collection of cases related by Dr. Mosely, presents but one which continued ten days; but if this stage terminates by cure, we admit it might be of longer duration: yet the only one of this kind, according to the same author, perfectly recovered in fourteen days from the invasion of the last paroxysm; whereas we find that the last stage of Mary Tice's disease continued six weeks. Numerous facts also prove, that at this ultimate and violent crisis, the patient could not survive many days longer, from the impossibility of receiving either food or drink; from the dangers of suffocation; and from the repeated shocks of incessantly renewed convulsions, and raving madness; as was the case in the attack of James Cann, of this city, whom we had an opportunity of attentively observing in this horrible situation. The symptoms of your patient were also irregular and variable. From Saturday, in the morning, when she was taken, until Tuesday ensuing, she showed no signs of hydrophobia, which should have been the first evidence; at least you make no mention of them, and it is fair to infer

from your silence on this point, that they did not exist. Again, after the disease was declared to be Canine Rabies, we are told "that she *could drink warm teas without difficulty*, but that *cold water she could not venture to touch*." If this is hydrophobia, it must be confessed that it is of a very extraordinary character; for before the Scutellaria had been procured for her, by the simple application of ether on her neck, Dr. Gedney restored the power of swallowing, and she took wine, &c. We must suppose that this pathognomic symptom of Canine Rabies, (*Dyscatopsis*,) was chargeable to the continuance of disease in your patient, and participated more of difficulty of swallowing, than of horror of water.

II. The lateness of your specific treatment forms another objection against the existence of the disease; for your most efficient remedies were not used until the expiration of twelve or fourteen days from the invasion of the paroxysm. No person will contend that such delay could occur with impunity in hydrophobia. In the instance of Mrs. Case, cured by Mosely in this stage, he tells us, that the loss of a few hours only, would have cut off all hope of recovery; and if Mary Tice survived by the help of venesection, mercury, cathartics, and scutellaria, exhibited after twelve days from the invasion; we cannot conceive that she laboured under Canine Rabies.

III. If from the recital of her case we resume the *diagnosis*, we shall be led to conclude that it was a disease of a very different character. "She was bitten in March, a little above the elbow; the wound did not cicatrize till the end of November; it continued a small running sore, resembling an issue, being occasionally covered by a little scab, which would easily and often be rubbed off. Early in December she felt an uneasiness in the stomach," &c. It is here remarked, that as soon as the wound had cicatrized, unusual symptoms appeared, such as pain from the arm to the neck, shoulder, and throat, and in the left side, attended with a glandular swelling in the armpit, fever and

delirium. Three days after her disease manifested symptoms of hydrophobia, she was in a state of raving madness, but occasionally taking drinks, until paraplegy and blindness took place. After this she had no biting fits ; but the swelling of the arm, tormenting headach, burning heat at the stomach, and fever continued, until Dr. Gedney took away sixteen ounces of blood ; her relief was but momentary ; and she continued extremely ill till the expiration of a week, when nature stepped in to her relief, by a copious and spontaneous bleeding from the nose : now we find the glandular swelling in the axilla disappearing, but an abscess on the former wound had suppurated, and discharged, during ten days, and then healed.

Assembling and connecting all these facts, it now appears that the disease commenced with the closing of an habitual running sore on the arm, and that the cessation of the discharge created, soon after, all those convulsive and hysteric symptoms, which took place, and again subsided on the return of suppurative inflammation. And on what ground, or for what reason, should we now call this hydrophobia ? Is it because she was bitten by a mad dog ? But she may have received the poison—and if she did, it is highly probable that it had been exhausted by a ten months' discharge. We are instructed by Galen, Fothergill, Portal, and others, that running sores and hemorrhages, from wounds caused by the bites of rabid animals, have often been the most effectual preservatives against Canine Rabies. Is it from the shrieks of the girl, her barking, her trotting, her bitings, and raving madness ? Who is not acquainted with still more strange effects of spasms, agitations of the body, and errors of the mind, in Hysteria ! especially in females of plethoric constitution, and at the age of puberty ? Is it because the patient had a difficulty of swallowing, or of drinking, and frothed at the mouth ? These are usual symptoms of Hysteria, from a sensation of great pressure, constriction, and choking at the throat, and can truly cause hydrophobic effects, not only in this, but in many other spasmodic and te-

tanic affections. Thomas, in his Practice of Physic, observes, that Hysteria is more apt to terminate in Epilepsy, than in any other disease; and it is worthy of remark, that the Hysteria of Mary Tice was critically terminated by a paralysis of the lower extremities, and of the optic nerves.

In addressing you, gentlemen, and communicating our few remarks on a disease, the rare occurrence of which has caused it to be often confounded with others, we are neither actuated by party views, nor unfriendly motives. Although we are not personally acquainted, we are, nevertheless, professionally connected; and it is our reciprocal duty to maintain that unity of doctrine which alone can ensure to us the confidence of our fellow-citizens, and to them the most beneficial services of the healing art.

Yours respectfully,

THE EDITORS.

New-York, October 20, 1820.

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*Eye Infirmary.*

WE have great pleasure in announcing to the public the establishment in this city of an Eye Infirmary, by Doctors Rodgers and Delafield as *Attending*, and Doctors Post and Borrowe as *Consulting*, Surgeons. The object of this Institution is to afford relief to that numerous class of the community, who are most liable, from neglect or empirical treatment, to the worst forms of diseases of the eye. A similar establishment in London has been productive of the most beneficial consequences, not only in administering relief to great numbers, who might otherwise have been neglected, but by materially advancing our knowledge, and improving the treatment of this class of diseases. From the assiduity and talents of the gentlemen engaged in this undertaking, we anticipate the best results.



*New-York Hospital Register.*

The second part of the first volume of the Medical and Surgical Register has just appeared, from the press of Collins & Co. containing a variety of interesting cases, and a summary account of the yellow fever, as it prevailed in different parts of the United States during the summer and autumn of the year 1819. In our next number we intend to give our readers a critical analysis of its contents.

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We have lately received Dr. Devéze's work on the Yellow Fever. We are gratified to find the Parisian physician inculcating the sound doctrine of the non-contagious nature of this disease.

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Just published, by E. Bliss, a Letter on the Yellow Fever of the West-Indies, by Dr. Daniel Osgood, addressed to Dr. Cyrus Perkins, of this city, in which the author, purposely avoiding all controversy, professes to give the results of twenty years professional experience in the port of Havana.

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*A Card.*

In the Medical and Surgical Register of the New-York Hospital, published in 1818, by Drs. Watts, Mott, and Stevens. there is an account, by Dr. Watts, of thirteen cases of disease occasioned by the drinking of cold water in very warm weather, and of their treatment in the New-York Hospital. From the manner in which that statement is drawn up, and communicated to the public, every reader unacquainted with all the facts and circumstances, would naturally infer that Dr. Watts was the attending physician, and

directed the mode of treatment which proved so successful : whereas the truth is, I was at that time in attendance, and these cases were prescribed for and treated under my sole and immediate directions ; which were carried into effect by that intelligent and judicious young physician, Dr. Campbell, who was then the medical resident. The autopsic examination, referred to in page 84 of the above work, was also made under my direction.

JOHN. NEILSON.

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*A Card.*

The author of the Review of Dr. Shecut's Medical and Philosophical Essays, in the last number of the Repository, regrets that he was not furnished in time with the replication, signed Justitia, (as published in the Times, a newspaper of Charleston,) to be noticed in the present number ; but proper explanations will be given in the next. In the mean time, it is not conceived how personal worth can be depreciated by Medical and Philosophical strictures.

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*Officers of the Medical Society of the City of New-York,  
for the ensuing Year.*

Dr. JOHN R. B. RODGERS, *President.*

Dr. GILBERT SMITH, *Vice President.*

Dr. FELIX PASCALIS, *Corresponding Secretary.*

Dr. PETER C. TAPPAN, *Secretary.*

Dr. ANDREW ANDERSON, *Treasurer.*

Dr. JAMES R. MANLEY, *Delegate to State Med. Soc.*

CENSORS.

Drs. JOHN B. BECK,

JOHN C. CHEESMAN,

JOHN WATTS, JUN.

SAMUEL OSBORN,

ANSEL W. IVES.

*University of the State of New-York.*

College of Physicians and Surgeons.

(CIRCULAR.)

*City of New-York, July 7, 1820.*

The Honourable the Regents of this University, having lately modified the regulations of the College of Physicians and Surgeons, those concerning Studies are, at present, as follows :

1. The Lectures begin, annually, on the first Monday in November, and end on the last day of February.

2. The Students are required to Matriculate every Session, and pay each time a Matriculation Fee of Five Dollars, to be applied to the contingent expenses of the College, and the increase of the Library. All those who Matriculate have the use of the Library.

3. There is paid to each Professor a sum not to exceed Fifteen Dollars for each course of Lectures; and the Lectures of Professors holding joint Professorships are considered but as one Course.

4. The Examinations are held by the President and Professors, in the presence of the Trustees.

5. The Commencement is held annually, on the first Tuesday in April.

6. The expense of Graduation is Twenty-five Dollars.

7. " No person shall be admitted as a candidate for the Degree of Doctor of Medicine, unless he shall have regularly studied Medicine for three years with some respectable Practitioner, shall have Matriculated in this College, and shall have attended one complete Course of Lectures delivered under the authority of the same, at not less than two Winter Sessions thereof; or, unless he shall have previously attended an entire Course of Lectures at some other respectable Medical College or University, as well as a complete Course of Lectures delivered as aforesaid in the

said College of Physicians and Surgeons at one Winter Session thereof. Provided always, that the Lectures of the Professor of Clinical Practice of Medicine shall not be deemed necessary to the completion of a Sub-graduate Course in the said College, unless such Professor shall, in the judgment of the Trustees of said College, be provided with a suitable ward and proper subjects to enable him to deliver such Lectures to advantage."\*

8. The following is the Course of Lectures :

*Institutes and Practice of Medicine*, by DAVID HOSACK,  
M. D.

*Chemistry*, by WILLIAM JAMES MACNEVEN, M. D.

*Botany and Materia Medica*, by SAMUEL LATHAM  
MITCHILL, M. D.

*Anatomy and Physiology*, by WRIGHT POST, M. D.

*Clinical Practice of Medicine*, by WILLIAM HAMERSLEY,  
M. D.

*Principles and Practice of Surgery*, by VALENTINE  
MOTT, M. D.

*Obstetrics and the Diseases of Women and Children*, by  
JOHN W. FRANCIS, M. D.

By order of the Trustees,

SAMUEL BARD, M. D. *President.*

JOHN W. FRANCIS, M. D. *Registrar.*

N. B. It is recommended to Students coming to this University from other States, to provide themselves with a certificate of age, and of the time they studied with a private practitioner, or in a College, so as to satisfy the requirements of Article 7.

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*Harvard University.*

The Lectures of the Medical Institution of Harvard University will begin at the Medical College in Boston on the

\* Extract from the Regulations of the Regents.



third Wednesday of November, and continue daily for three months.

*Anatomy and Surgery*, by Dr. WARREN.

*Chemistry*, by Dr. GORHAM.

*Midwifery, and Medical Jurisprudence*, By Dr. CHANNING.

*Materia Medica*, by Dr. BIGELOW.

*Theory and Practice of Medicine*, by Dr. JACKSON.

Dr. BIGELOW, *Dean of the Faculty*.

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*University of Pennsylvania.*

The Medical Lectures will commence, as usual, on the first Monday of November.

JOHN REDMAN COXE,  
*Dean of the Faculty*.

August 1st, 1820.

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*University of Maryland—Faculty of Physic.*

The Medical Instruction in this Institution will commence on the last Monday of October, and terminate on the last day of February.

*Anatomy*, by JOHN B. DAVIDGE, M. D.

WILLIAM HOWARD, M. D. Adjunct.

*Theory and Practice of Medicine*, by NATHANIEL PORTER, M. D.

*Chemistry and Mineralogy*, by ELISHA DE BUTTS, M. D.

*Materia Medica*, by SAMUEL BAKER, M. D.

*Principles and Practice of Surgery*, by GRANVILLE SHARP PATTISON, Esq.

*Midwifery and Diseases of Women and Children*, by R. W. HALL, M. D.

*Institutes of Physic*, by MAXWELL M'DOWELL, M. D.  
*and Dean of the Faculty*.

Baltimore, Sept. 1820.

*Transylvania University.*

The Medical Lectures in the Transylvania University will commence on the first Monday in November next, by  
 B. W. DUDLEY, M. D. *Professor of Anatomy and Surgery.*  
 CHARLES CALDWELL, M. D. *Institutes of Medicine and Materia Medica.*

W. H. RICHARDSON, M. D. *Obstetrics and Diseases of Women and Children.*

JAMES BLYTHE, D. D. *Chemistry.*

SAMUEL BROWN, M. D. *Theory & Practice of Medicine.*

CHARLES CALDWELL,  
*Dean of the Faculty.*

*Lexington, Ky. July, 1820.*

*Medical College of Ohio.*

The session of this Institution will commence the first week of November, and terminate the first week of April.

*Institutes and Practice of Medicine, including Obstetrics and the Diseases of Women and Children, by DANIEL DRAKE, M. D.*

*Anatomy and Surgery, by JESSE SMITH, M. D.*

*Materia Medica and Pharmacy, by BENJAMIN S. BOH-  
 RER, M. D.*

*Chemistry, by ELIJAH SLACK, A. M.*

DANIEL DRAKE, *President.*

*Cincinnati, Ohio, August, 1820.*

The public will without doubt be pleased to hear that Doctor JOSEPH LOVELL, who holds the highly responsible station of Surgeon General in the United States Army, purposes to give occasional abstracts from those reports, which are required to be made to him by all Surgeons of the ar-

my. They will be found to be interesting data from which to deduce the history of epidemic diseases, in so far as they depend upon atmospheric causes; and when those abstracts shall be accompanied with topographical descriptions of the various places to which they refer, they will combine such a body of information, on this important subject, as no other country, under any circumstances, could possibly furnish. We have subjoined the tables of comparative temperature and prevailing winds and weather for the first three months of the present year, and take great pleasure in publishing them, with the introductory remarks of Dr. Lovell, addressed to the Editors of the *National Intelligencer*, in the justness of which we perfectly coincide.

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*Washington, July 25, 1820.*

MESSRS. GALES & SEATON,

Should you find a place in the miscellaneous department of your paper for the publication of a monthly abstract of the meteorological observations made on the several military posts in the United States, it would, perhaps, be gratifying to the curious, and might, in time, become a useful document to the natural philosopher, as well as to the scientific physician. To the latter, especially, a series of observations, through a great extent of country, would be of the highest importance in ascertaining the effects of atmospheric changes, both occasional and permanent, upon the human system, and particularly upon certain formidable diseases, some of which, as the bilious remittent fever, arise about the same time at a great variety of places, within a given latitude, while others, as the epidemic of 1812-13, commencing at a single point, traverse the continent with greater or less rapidity, usually taking, it is believed, a course from North and East to South and West. It has been presumed, and no doubt with good reason, that these complaints, especially the periodical ones, depend, in a

great measure, upon sensible changes in the atmosphere ; but observations have seldom been made to a sufficient extent, either as to time or place, to lead to any general and certain conclusions.

Our military posts, at present, lie between latitude  $29^{\circ} 30'$ , and about  $45^{\circ} 50'$  North, and between longitude  $70^{\circ} 20'$  to about  $96^{\circ} 42'$  West from Greenwich, being upwards of  $16^{\circ}$  of latitude and  $26^{\circ}$  of longitude. The reports from which these abstracts are taken constitute a part of those required of the surgeons of the army ; and, together with the returns of sick, the remarks made upon the causes, symptoms, and treatment, of diseases, as well as the medical topography of the several posts, may, perhaps, become a valuable document to the medical philosopher, especially should success attend an attempt to collect the bills of mortality from different sections of the country, with more detailed remarks upon the causes, rise, progress, and symptoms, of diseases, within smaller districts. These, however, are subjects too strictly professional to excite much interest in the public at large, and must, therefore, be confined to professional publications ; in the mean time, many of your readers may be desirous of noting the effects of extensive cultivation of the soil, and increase of population, as well as local situation, with respect to large bodies of water, extensive prairies, forests, mountains, &c. upon the weather, in different parts of the country, at the same period, and the changes which take place at a given point in a succession of years ; as it might lead to important practical results, relative to many things intimately connected with the economy of life, and which depend, in a great measure, upon climate. We observe, for example, that the mouth of the St. Peters is situated at a distance from any large body of water, and is surrounded by immense and uncultivated prairies and forests ; that it is but a few miles North, and about  $18^{\circ}$  West, of Sackett's Harbour, situated near the outlet of Lake Ontario ; and, at the former place, the mean temperature, at 7 A. M. in January, was  $25^{\circ}$  below that at



the latter : the difference being as great as between Sackett's Harbour, in latitude  $43^{\circ} 55'$ , and Mobile, in latitude  $30^{\circ} 40'$ , which is the most southern point at which an observation was made. Again: Council Bluffs, situated on the Missouri, between 700 and 800 miles above St. Louis, is in the same latitude, and about  $24^{\circ}$  west of Fort Trumbull, in Connecticut; and the mean temperature at the former place, at the same time, was  $20^{\circ}$  below that at the latter, and  $17^{\circ}$  below that at Sackett's Harbour, which is upwards of  $2^{\circ}$  North of it.

We may also observe, that the mean temperature for January is  $32^{\circ} 10'$ ; for February,  $42^{\circ} 56'$ ; for March,  $46^{\circ} 32'$ ; and for the quarter,  $40^{\circ} 30'$ ; the former by 15, and the two last by 16 observations. In January, the prevailing winds were NW., N. and W.; in February, NW., SE. and S.; in March, NW., W. and SE.; for the quarter, NW.; the proportion of southerly and easterly winds increasing gradually through the quarter. Out of 15 places of observation in January, the prevailing weather was fair at 14; and out of 16, in February and March, the prevailing weather was fair at 15. In January, the proportion was about 16 1-2 fair, 8 cloudy, 2 rain, 4 snow; in February, 17 fair, 7 cloudy, 3 rain, 2 snow; in March, 18 fair, 7 cloudy, 4 rain, 2 snow; and for the quarter, 51 1-2 fair, 22 cloudy, 9 rain, and 8 snow.

The latitude and longitude of some places, as here given, may not be perfectly correct; they are, however, sufficiently so for our present purpose. The localities of many of them are well known, or may be obtained from books; those of some have recently been given in several of the public papers; and such observations on this subject will, from time to time, be made, as can be collected from official reports, and appear pertinent and useful.

Respectfully, yours,

JOSEPH LOVELL,  
Surgeon General United States Army.

## THERMOMETER.

Places.	Lat.	Long.	THERMOMETER.										Hottest day.	Coldest day.		
			Highest degree.			Lowest degree.			Mean temperature.							
			VII.		II.	IX.	VII.		II.	IX.	VII.				II.	IX.
			VII.	II.	IX.	VII.	II.	IX.	VII.	II.	IX.	VII.			II.	IX.
Plattsburgh,	44	42 73	25	27	30	29	9	14	11	14	19 21	38 16	51	Tues. 4.	Sun. 2.	
St. Peters,	44	01 93	30	24	29	16	-30	-6	-21	-5	53	5	93	-1	03 Sat. 8.	Sun. 30.
Sackett's Harbour,	43	55 75	57	26	32	31	4	15	18	20	96	24	64	23	58 Sun. 30.	Ths. 13.
Portsmouth, N. H.	43	05 70	45		35			9				21	35			
Boston,	42	22 71	04	29	35	32	5	20	11	18	45	23	03	21	96 Sun. 30.	Sun. 2.
Council Bluffs,	41	31 96	42	24	40	36	-22	6	5	3	19	15	86	6	81 Fri. 7.	Sun. 30.
Fort Trumbull, Con.	41	24 72	30	34	38	34	12	18	18	23	32	28	00	27	16 Sat. 29.	Sat. 1.
New-York Harbour,	40	41 74	01	40	48	40	9	18	14	25	93	31	32	28	35 Sat. 8.	Sat. 1.
Pittsburgh arsenal,	40	32 30	08	38	42	39	10	21	21	27	13	30	73	30	00 Fri. 23.	Ths. 20.
Fort Mifflin, Pa.	39	57 75	10	28	48	38	6	16	14	20	77	33	77	25	90 Fri. 28.	Sat. 1.
Fort Washington, Md.	38	52 77	02	42	41	35	14	22	23	29	93	35	09	32	25 Mon. 17.	Sat. 1.
Belle Fontaine,	38	50 90	03	40	42	48	14	10	1	18	88	24	9	20	62 Fri. 7.	Tues 11.
Fort Johnson, N. C.	33	54 78	10	54	63	54	28	52	32	42	74	54	06	46	22 Sun. 9.	Tues 18.
Amelia Island,	30	45 81	57	62	79	59	35	44	39	51	35	60	83	54	16 Mon. 10.	Wed. 12.
Fort Scott, Geo.	30	43 84	38	66	74	70	32	42	34	46	32	59	25	52	03 Ths. 27.	Wed. 12.
Mobile,	30	40 88	21	61	72	63	22	44	34	43	96	58	09	48	57 Sat. 29.	Mon. 17.
Baton Rouge.	30	36 91	13	none	for	the	month.									



## FEBRUARY, 1820.

## THERMOMETER.

Places.	THERMOMETER.									Hottest day.	Coldest day.	
	Highest degree			Lowest degree.			Mean temperature.					
	VII.	II.	IX.	VII.	II.	IX.	VII.	II.	IX.			
Plattsburgh,	40	52	42	-17	-12	-4	19	79	31	51	Tues 15.	Wed. 2.
St. Peters.	32	46	36	-14	-10	-4	14	13	28	72	Fri. 25.	Tues. 1.
Sackett's Harbour,	48	53	57	0	1	7	29	34	33	10	Sat. 26.	Tues. 1.
Portsmouth, N. H.		48			-3			30.	39			
Boston,	31	50	40	-1	8	10	25	58	34	51	27	Wed. 23.
Council Bluffs,	30	71	36	-1	6	-8	23	14	38	34	29	Wed. 2.
Fort Trumbull, Con.	42	52	48	8	10	10	30	34	37	47	34	Tues. 1.
New-York Harbour,	37	48	40	0	12	2	31	30	35	72	33	Tues. 1.
Pittsburg arsenal,	52	62	60	10	16	16	39	06	44	17	43	Tues. 1.
Fort Mifflin, Pa.	38	64	44	6	12	10	32	17	43	13	35	Tues. 1.
Fort Washington, Md.	58	65	66	16	20	20	42	82	49	37	45	Tues. 1.
Belle Fontaine,	54	72	69	2	16	23	40	82	45	00	48	Tues. 1.
Fort Johnson, N. C.	57	79	68	40	60	46	51	35	62	48	52	Tues. 1.
Amelia Island,	66	78	70	50	59	55	60	51	69	62	64	Tues. 1.
Fort Scott, Geo.	70	78	70	31	46	48	54	51	68	74	58	Tues. 1.
Mobile,	45	78	60	30	60	44	55	06	68	86	59	Tues. 1.
Baton Rouge,	70	78	76	31	53	52	57	10	67	96	67	Fri. 29.
												Fri. 4.



## FEBRUARY, 1820.

Places.	WINDS.										WEATHER.				Prevailing. gr.		
	N.		NW.		NE.		E.		SE.		S.		SW.			W.	
	days		days		days		days		days		days		days			days	
	days		days		days		days		days		days		days			days	
Plattsburgh,	5	3			4		12				5		17	12		Fair.	
St. Peters,	1	4			4		1				8		21	2		Fair.	
Sackett's Harbour,	10	2			6		4		2		1		17	6		Fair.	
Portsmouth, N. H.	1	13	2		3		4		1		4		17	8		Fair.	
Boston,	3	7	2		1		2		1		9		15	7		Fair.	
Council Bluffs,		6			3		4		13		2		19	9		Fair.	
Fort Trumbull, Con.	6	4	10				2		2		1		15	4		Fair.	
New-York Harbour,	1	17					2		2		6		18	1		Fair.	
Pittsburgh arsenal,		3					22		7		4		11	9		Fair.	
Fort Mifflin, Pa.		4			6		2		6		4		16	8		Fair.	
Fort Washington, Md.	2	6	3				2		2		3		20	3		Fair.	
Belle Fontaine,																	
Fort Johnson, N. C.		6	3				1		1		1		22	7		Fair.	
Amelia Island,	1	3	2		5		6		3		4		26	9		Fair.	
Fort Scott, Geo.	2	2	1		4		1		1		18		29	8		Fair.	
Mobile,	2	4					15		7		3		17	11		Fair.	
Baton Rouge.	4	4	5				7		7		2		9	9		Clo.	

## MARCH, 1820.

Places.	THERMOMETER.												Hottest day.	Coldest day.						
	Highest degree.						Lowest degree.								Mean temperature.					
	VII.	II.	IX.	VII.	II.	IX.	VII.	II.	IX.	VII.	II.	IX.								
Plattsburgh,	37	53	42	-2	0	6	23	41	32	96	26	90	Sat. 25	Tues. 7						
St. Peters,	37	68	42	-10	19	2	21	29	34	58	23	41	Thur. 23	Wed. 8						
Sackett's Harbour,	56	64	64	9	14	14	29	96	34	61	34	09	Sun. 26	Wed. 8						
Portsmouth, N. H.		62			12			33	70											
Boston,	51	74	47	4	24	20	30	35	40	48	33	29	Sun. 26	Fri. 3						
Council Bluffs,	42	70	64	0	16	5	27	64	42	70	31	51	Thur. 23	Tues. 7						
Fort Trumbull, Con.	50	58	56	18	22	24	34	87	39	58	38	53	Mon. 27	Fri. 3						
New York Harbour,	52	68	50	20	20	16	34	77	42	58	37	64	Sun. 26	Thur. 2						
Pittsburgh arsenal,	40	54	47	21	29	30	34	70	41	75	40	15	Mon. 20	Sat. 11						
Fort Mifflin, Pa.	50	70	56	24	30	22	35	03	47	35	39	93	Sun. 26	Tues. 7						
Fort Washington, Md.	58	68	63	26	36	36	41	80	45	51	45	74	Mon. 27	Fri. 3						
Belle Fontaine,	78	70	70	26	42	40	48	88	52	23	53	07	Wed. 22	Tues. 7						
Fort Johnson, N. C.	62	62	62	34	54	53	55	93	64	70	58	93	Sat. 25	Fri. 3						
Amelia Island,	68	70	70	50	62	55	60	19	71	77	60	70	Tues. 7	Fri. 10						
Fort Scott, Geo.	78	70	70	38	67	64	56	48	69	77	62	58	Mon. 6	Fri. 10						
Mobile,	63	68	68	36	54	44	54	25	67	29	57	64	Thur. 30	Thur. 9						
Baton Rouge,	59	78	78	32	32	32	52	45	65	32	65	38	Thur. 30	Wed. 8						

MARCH, 1820.

Places.	WINDS.								WEATHER.				Prevailing.				
	N.		NW.		NE.		E.		SE.		S.			SW.		W.	
	days		days		days		days		days		days			days		days	
	days		days		days		days		days		days			days		days	
Plattsburgh,	3	2			9	1	10				6	S	17	13	1	Fair.	
St. Peters,	4	11	1			1	2			3	9	NW	25	4	1	Fair.	
Sackett's Harbour,	7	10	2				2			6	4	NW	16			Fair.	
Portsmouth, N. H.		12	7		4	1	3			1	3	NW	19	5	3	Fair.	
Boston,	9	7				2	4			6	3	N	13	8	3	Fair.	
Council Bluffs,	5	2	9		5	7	1			2		NE	20	7	1	Fair.	
Fort Trumbull, Con.	6	5	7			1				10		SW	18	8	5	Fair.	
New-York Harbour,		16					2			9	4	NW	20	3	2	Fair.	
Pittsburgh arsenal,		4				17						SE	9	6	2	Fair.	
Fort Mifflin, Pa.	2	4	3		5	3				4	10	W	17	4	8	Fair.	
Fort Washington, Md.	2	7	3			1	13			5		S	18	6	7	Fair.	
Belle Fontaine,																	
Fort Johnson, N. C.	9	1	4			3	12					S	17	8	6	Fair.	
Amelia Island,		6	8		2	7	1			4	3	NE	23	3	5	Fair.	
Fort Scott, Geo.	1		1		9		3				17	W	22	9		Fair.	
Mobile,	2	9	3		1	13				3		SE	16	5	10	Fair.	
Baton Rouge.	4	5	10		2	4				3	3	NE	7	16	8	Clo.	

*Atmospheric Constitution, Diseases, &c.*

It is no longer a question in philosophy, whether or not man, in his moral and physical capacity, be equally subject to the influence of the seasons and the climate, the atmosphere which he breathes, and the emanations from the soil which he inhabits. This doctrine, which we have received from Hippocrates, was also taught by Aristotle, Plato, and a multitude of other sages, who have successively demonstrated, that life and health were not the product merely of original organization ; and that whatever mental or physical attributes man, in his rude and primitive state, was endowed with, they were capable of being improved and perfected by social restrictions, judicious habits, and early fostering cares, which would not only bring into action, but give a proper direction to all those faculties.

This doctrine receives much illustration from the history of human diseases. Our daily observations, as well as the records of medical philosophy, furnish us with the knowledge of epidemics, created by atmospheric vicissitudes, circumscribed by the nature of the soil, the activity of vegetation, &c. which have ravaged for a season, and then suddenly disappeared, not from the want of new subjects to prey upon, but from the operation of great meteorological changes. Hence the most destructive pestilences, which have seemed for a time to threaten the extermination of the human race in large districts of country, have suddenly vanished, leaving no traces in the recollection of surviving generations but the terror of their ravages. But let us be permitted still farther to illustrate this position. The Coan sage, (*de aere, locis, et aquis*) has extended this doctrine, by attributing to the operation and agency of the atmospheric constitution, the superior strength and vigour of the warlike nations of Europe, over the inhabitants of southern Asia, whose nerves were never



strongly excited, nor their temperaments invigorated, by the successive and alternate changes of heat and cold. Galen has also inculcated on his readers, that virtue, nobleness of mind, and a love of philosophy might be acquired, by studying the results which the various atmospheric changes, in the places which they inhabited, produced on their own systems. The famous Des Cartes still more strongly enforced the same doctrine, by asserting, that the mind of man was so much under the control of organic life, and external agents, that if it were possible to increase his capacity for becoming wiser and more sagacious, this power belonged to medicine.\*

From the subjoined tables, it appears that the wind has prevailed from the north and west during 21 days in July, 26 in August, and 29 in September. These are no doubt our salubrious winds; but the long-continued drought that attended them, deprived the earth of its due proportion of moisture, and rendered the air intensely hot: hence the diseases of the summer are found to have assumed an inflammatory character, with a great tendency to hemorrhagic fluxes, especially from the nose. This symptom occurred very frequently in the Influenza, which has been uncommonly rife during the latter part of August, and the whole of September, and has permitted very few of the inhabitants of this city and neighbouring country to pass through the autumnal season without feeling its effects. Although no epidemic, since the year 1802, has been more general in its influence, its symptoms were nevertheless for the most part mild, and have not been attended with those serious pulmonic affections, which at that time marked its progress.

The maximum temperature in July was  $90^{\circ}$ – $83^{\circ}$ ; in August,  $93^{\circ}$ – $87^{\circ}$ , and in September  $88^{\circ}$ – $83^{\circ}$ . This extra-

\* Animus adeo a temperamento et organorum corporis dispositione pendit, ut si aliqua invenire possit, quæ homines sapientiores, et ingeniosiores reddat, quam hactenus fuerunt, credam illam in medicina queri debere  
(De Method. tit. 6. s. 2.)

ordinary high range of the thermometer in our latitude, unattended by rains, accounts, by the absence of miasmatic exhalations, for our comparative exemption from malignant disease. The summer has not, however, been equally dry and cloudless in the more southern parts of our country. Below the latitude of Baltimore there have been more frequent rains, and less atmospheric heat, and hence, at periods unusually late, malignant epidemics have prevailed with unusual virulence, and greater mortality, more particularly at Savannah and New-Orleans.

The northern states have not been entirely exempt from malignant diseases. The city of New-York (which, with the exception above-mentioned, and the ordinary proportion of summer diseases, viz. Cholera, infantile flux, and dysentery, has enjoyed its usual degree of health,) has nevertheless, in one particular quarter, chiefly inhabited by a population poor, destitute, and abandoned, been scourged by a fever of a malignant character, attended with unusual mortality. We forbear to express any opinion on its nature, origin, or diagnostic symptoms, as the Medical Society have instituted an inquiry on this subject, the result of which we hope to be able to lay before our readers in our next number.

Early in June, an alarm of Yellow Fever prevailing in Middletown, a small city on the Connecticut river, our Board of Health was induced to commission Dr. Beck to proceed to that place, and inquire into its origin, character, and extent. From that gentleman's report, it appears that thirteen cases of the disease had occurred between the 3d and 26th of June, of which seven had proved fatal. All the individuals affected, except three girls, who were employed in a cotton factory,  $4\frac{1}{2}$  miles from the town, had been lately on board of vessels arriving from hot climates, or lived very near to the wharves where these vessels were unladed. In the cases of the three girls, no decisive opinion of the cause of their disease can be given; they may, or may not, have been exposed to take the disease from the same source as the others. Little re-

liance can be placed on the accounts of persons of that description, who are generally so little attentive to the preservation of health and the common occurrences of life. The possibility of their having received the disease from the opening of a bale of cotton, in the same way as the plague is known to have been communicated in the Lazaretto at Marseilles, may strike some as the probable solution of the difficulty; but as we know of no instance of the yellow fever being propagated in that way, we merely state it for the consideration of inquirers. This limited prevalence has furnished no fact to show the contagious character which some are so willing to attribute to the disease; for if the subtile poison could be caught at many miles distance by a few persons, why did not the same immediately affect the whole population of Middletown, where all the cases of yellow fever remained, until they died or recovered? On the contrary, the facts collectively elucidate the character of the disease, as heretofore observed; and demonstrate the benefits to be derived from the rigid enforcement of our present quarantine regulations.

The yellow fever also appeared in the city of Philadelphia, about the middle of August, and continued to prevail to the beginning of October. The victims were few, and the disease limited to a small part of the town; the other parts enjoying an entire exemption. We understand several physicians of that city intend shortly to publish an account of it, from which we anticipate additional evidence of the nature of our summer endemics.

*Meteorological Observations of the Weather, in the City of  
New-York, from May to September inclusive, 1820.*

Date.	Winds.			Weather.			Thermometer.		
	7 o'clock, A. M.	3 o'clock, P. M.	10 o'clock, P. M.	7 o'clock, A. M.	3 o'clock, P. M.	10 o'clock, P. M.	7 o'clock, A. M.	3 o'clock, P. M.	10 o'clock, P. M.
May									
1	W	S	S	Clear	Clear	Clear	55	70	60
2	NE	NE	E	db.	do.	do.	53	58	45
3	S	SE	SE	do.	do.	Cloudy	48	69	49
4	S	SE	SE	do.	do.	Clear	50	62	49
5	S	SE	SE	do.	do.	Cloudy	50	63	50
6	E	NE	NE	Drizz.	Cloudy	do.	50	56	50
7	NE	S	S	do.	do.	Clear	49	65	55
8	NE	S	SE	do.	Clear	Cloudy	53	62	53
9	NW	S	S	Clear	do.	Clear	49	64	55
10	N	S	S	do.	do.	Cloudy	51	69	59
11	SE	E	E	Cloudy	Rain	Rain	50	63	57
12	W	S	SW	Clear	Clear	Clear	58	72	59
13	W	S	W	do.	Show.	do.	57	66	57
14	W	SW	SW	do.	Clear	do.	57	67	55
15	SW	S	N	do.	do.	Cloudy	55	68	58
16	N	N	NW	Rain	Rain	Rain	48	49	46
17	N	E	E	do.	do.	Cloudy	47	52	49
18	N	SE	SE	Cloudy	Cloudy	Rain	47	62	50
19	NE	NE	NE	Rain	Rain	do.	50	52	50
20	NE	S	SE	do.	Clear	do.	52	60	55
21	S	E	NE	do.	Cloudy	do.	53	64	54
22	N	S	S	do.	do.	Clear	53	68	56
23	W	S	S	Clear	Clear	do.	58	76	66
24	S	N	N	do.	Cloudy	Cloudy	65	76	66
25	N	S	S	Cloudy	Clear	do.	64	76	56
26	NE	NE	NE	Rain	Rain	Rain	52	51	45
27	NW	NW	NW	Clear	Clear	Clear	45	60	50
28	E	SE	S	do.	do.	Cloudy	50	62	50
29	S	S	S	Cloudy	do.	do.	53	67	58
30	S	S	S	Clear	do.	Show	56	72	62
31	NE	NE	N	Rain	Rain	Clear	60	60	55



*Meteorological Observations of the Weather, in the City of  
New-York, from May to September inclusive, 1820.*

Date.	Winds.			Weather.			Thermometer.		
	7 o'clock, A. M.	3 o'clock, P. M.	10 o'clock, P. M.	7 o'clock, A. M.	3 o'clock, P. M.	10 o'clock, P. M.	7 o'clock, A. M.	3 o'clock, P. M.	10 o'clock, P. M.
June									
1	N	S	SW	Clear	Clear	Clear	57	67	55
2	W	S	S	do.	do.	do.	56	71	56
3	NE	SE	S	Cloudy	do.	do.	56	70	60
4	NW	SW	SW	do.	do.	do.	60	71	63
5	NW	NW	N	do.	Cloudy	Cloudy	62	78	62
6	N	NW	NW	Clear	Clear	Clear	56	68	58
7	W	SW	SW	do.	do.	do.	57	73	63
8	SW	SW	SW	Dull	Dull	do.	65	76	67
9	SW	S	N	Clear	Clear	Show.	68	80	67
10	NE	S	NE	do.	do.	Cloudy	68	78	63
11	NE	NE	NE	Cloudy	Cloudy	Clear	63	68	58
12	NE	NE	NE	do.	Rain	Mist	56	64	62
13	S	NW	W	Mist	Clear	Clear	64	75	70
14	W	W	W	Clear	do.	do.	68	80	73
15	W	W	W	do.	do.	do.	70	80	73
16	NE	S	NE	do.	do.	do.	70	80	69
17	NE	SE	SE	Cloudy	do.	do.	65	74	63
18	NE	SE	SE	Clear	do.	do.	65	71	62
19	SW	S	S	do.	do.	do.	63	76	68
20	SW	S	S	do.	do.	do.	66	79	73
21	SW	S	S	do.	do.	do.	70	82	76
22	SW	SW	SW	do.	do.	do.	74	85	77
23	N	SW	SW	do.	do.	do.	72	83	75
24	NE	S	S	do.	do.	do.	72	83	75
25	S	SW	N	do.	Cloudy	Cloudy	71	80	70
26	N	N	N	Cloudy	Clear	Clear	63	75	65
27	N	S	S	Clear	do.	do.	67	76	69
28	N	W	SW	do.	do.	do.	60	78	72
29	W	SW	SW	do.	do.	do.	69	82	77
30	SW	SW	SW	do.	do.	do.	75	87	81

*Meteorological Observations of the Weather, in the City of  
New-York, from May to September, inclusive, 1820.*

Date.	Winds.			Weather.			Thermometer.		
	7 o'clock, A. M.	3 o'clock, P. M.	10 o'clock, P. M.	7 o'clock, A. M.	3 o'clock, P. M.	10 o'clock, P. M.	7 o'clock, P. M.	3 o'clock, P. M.	10 o'clock, P. M.
July									
1	SW	S	NE	Clear	Clear	Cloudy	80	89 <sup>1</sup> / <sub>2</sub>	77
2	NE	SE	SE	do.	do.	Clear	75	80	70
3	SE	S	SE	Cloudy	Cloudy	Cloudy	70	80	74
4	W	S	S	Clear	Clear	Clear	74	82	76
5	S	S	S	do.	do.	do.	75	86	79
6	SW	S	S	do.	do.	do.	79	85	80
7	N	S	S	do.	Cloudy	do.	79	83	75
8	S	S	S	do.	Clear	do.	75	82	74
9	SW	S	S	do.	do.	do.	73	82	76
10	NW	S	S	Cloudy	do.	do.	75	81	76
11	NE	SE	SE	Clear	do.	do.	74	80	72
12	S	S	S	do.	do.	do.	73	82	78
13	S	S	S	Dull	do.	do.	76	84	78
14	S	N	cal.	Clear	Rain	Cloudy	78	76	69
15	S	S	S	do.	Clear	Clear	65	79	74
16	W	S	S	do.	Cloudy	do.	73	78	70
17	N	SW	SW	do.	Clear	do.	72	81	75
18	W	S	S	do.	do.	do.	75	82	75
19	SW	S	cal.	do.	do.	Cloudy	75	82	74
20	N	N	cal.	Cloudy	do.	do.	72	80	74
21	NE	NE	NE	do.	Rain	do.	71	73	65
22	NE	S	S	Clear	Clear	Clear	67	75	67
23	NE	S	S	do.	do.	do.	68	75	66
24	W	S	S	do.	do.	do.	65	75	68
25	S	S	S	do.	do.	do.	70	82	76
26	S	S	S	do.	do.	Dull	75	84	80
27	SW	S	S	Dull	Cloudy	Cloudy	78	83	73
28	SW	S	S	Cloudy	Clear	do.	78	83	79
29	S	SE	S	do.	Rain	Rain	77	78	74
30	S	N	W	Show.	Cloudy	Cloudy	75	76	73
31	S	S	cal.	Cloudy	Clear	Clear	75	83	75

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New-York, from May to September, inclusive, 1820.*

Date.	Winds.			Weather.			Thermometer.		
	7 o'clock, A. M.	3 o'clock, P. M.	10 o'clock, P. M.	7 o'clock, A. M.	3 o'clock, P. M.	10 o'clock, P. M.	7 o'clock, P. M.	3 o'clock, P. M.	10 o'clock, P. M.
Aug.									
1	SW	S	cal.	Clear	Clear	Cloudy	75	84	76
2	SW	SW	W	do.	do.	Show.	73	82	75
3	N	S	S	do.	do.	Clear	69	80	71
4	S	S	cal.	Cloudy	Cloudy	do.	70	76	70
5	N	N	NE	do.	Rain	do.	70	71	68
6	NE	N	S	Clear	Clear	do.	65	75	72
7	NE	SE	S	do.	do.	Cloudy	68	77	70
8	S	S	S	Cloudy	Cloudy	do.	70	75	71
9	SW	S	cal.	do.	Clear	Clear	71	80	74
10	SW	S	S	Clear	do.	Cloudy	72	84	79
11	W	S	S	do.	do.	Clear	78	85	81
12	W	SW	NW	do.	do.	Show.	80	90	73
13	NW	W	NE	do.	do.	Cloudy	75	82	76
14	NE	E	NE	Cloudy	Cloudy	do.	73	74	70
15	NE	NE	NE	do.	Rain	do.	66	70	66
16	NE	NE	SE	Rain	Cloudy	do.	66	76	71
17	W	SW	S	Cloudy	Clear	Clear	70	80	70
18	N	NW	NW	Clear	do.	do.	68	76	67
19	N	NW	NW	do.	do.	do.	64	75	63
20	W	W	cal.	do.	do.	Cloudy	63	79	70
21	NE	S	cal.	do.	do.	Clear	68	78	67
22	NE	S	S	do.	do.	do.	67	77	70
23	SW	S	S	do.	do.	do.	68	76	70
24	N	SE	SE	do.	do.	do.	67	75	70
25	S	S	S	do.	do.	do.	68	79	71
26	S	S	S	do.	do.	do.	70	80	72
27	W	NW	N	do.	do.	do.	70	77	69
28	N	NE	NE	do.	do.	do.	65	77	65
29	NE	N	NW	do.	do.	do.	64	76	68
30	NW	S	S	do.	do.	do.	68	77	67
31	SE	S	S	do.	do.	do.	66	78	70

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Date.	Winds.			Weather.			Thermometer.		
	7 o'clock, A. M.	3 o'clock, P. M.	10 o'clock, P. M.	7 o'clock, A. M.	3 o'clock, P. M.	10 o'clock, P. M.	7 o'clock, A. M.	3 o'clock, P. M.	10 o'clock, P. M.
Sept.									
1	W	S	NW	Clear	Clear	Clear	68	81	67
2	NW	S	N	do.	do.	do.	60	73	62
3	N	W	W	do.	do.	do.	58	75	65
4	W	S	SW	do.	do.	do.	62	78	68
5	W	S	S	do.	do.	do.	65	79	67
6	W	S	S	do.	do.	do.	68	81	71
7	NE	S	NW	do.	do.	do.	68	81	70
8	NW	S	S	do.	do.	do.	70	81	75
9	SW	S	S	do.	do.	do.	71	85	75
10	SW	S	S	do.	do.	do.	71	85	76
11	SW	S	S	do.	do.	Cloudy	70	81	77
12	SE	NW	NW	Rain	do.	Clear	75	68	62
13	NW	NW	NW	Clear	do.	do.	55	70	60
14	NW	S	S	do.	do.	Cloudy	57	73	67
15	NW	S	SW	do.	do.	Clear	65	75	67
16	W	S	S	do.	do.	do.	65	75	68
17	W	S	S	do.	do.	do.	66	80	70
18	SW	S	NE	do.	do.	do.	68	80	70
19	NE	NE	N	Cloudy	Rain	Cloudy	67	62	54
20	N	N	NW	Clear	Clear	Clear	53	60	50
21	NE	NE	NE	do.	do.	do.	43	56	50
22	NE	N	SW	do.	do.	do.	49	64	56
23	W	S	SW	do.	do.	Cloudy	55	69	66
24	W	NW	NW	do.	do.	Clear	64	70	63
25	W	NW	N	do.	do.	do.	55	67	52
26	NE	S	S	do.	do.	do.	45	56	50
27	SE	S	S	do.	do.	do.	47	64	56
28	W	NW	N	do.	do.	do.	55	69	58
29	E	NE	NE	do.	Rain	Cloudy	54	62	58
30	NW	N	N	do.	Clear	Clear	56	72	60